MISSOURI STATE MEDICAID HEALTH INFORMATION TECHNOLOGY PLAN **UPDATE** (SMHPU)

January 2014
Version 1.0

REVISION HISTORY

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Version 1.0	01.16.2014	CMS	Initial Submission SMHP Update

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1 EXECUTIVE SUMMARY

1.1 Background

The Department of Social Services (DSS), MO HealthNet Division (MO HealthNet) is the state agency that administers the Missouri Medicaid program. The American Reinvestment and Recovery Act of 2009 (ARRA) included a $19.2 billion provision entitled the Health Information Technology for Economic and Clinical Health Act (HITECH). HITECH is administered by the Office of the National Coordinator for Health Information Technology (ONC). In Missouri, the Missouri Office of Health Information Technology (MO-HITECH) was formed to promote adoption of Health Information Technology and administer implementation of the HITECH Act. The DSS Director is the designated Missouri Health Information Technology Coordinator. The DSS and MO HealthNet Directors serve on the MO-HITECH Board.

HITECH grants were made available to conduct activities to facilitate and expand the electronic movement and use of health information among organizations according to nationally recognized standards through activities that include promoting participation in the statewide and nationwide exchange of health information and promoting the use of electronic health records by healthcare service providers for quality improvement.

To promote participation in the statewide and nationwide exchange of health information, the DSS applied for and received a HITECH grant from ONC to establish a statewide Health Information Network (HIN) for Missouri. The MO-HITECH Board created the Missouri Health Connection (MHC) to create and administer the Missouri Health Information Network. The MHC has contracted with InterSystems to create and host the platform for health information exchange in Missouri. Medicaid participation in the statewide HIN is considered to be a key factor in the HIN's overall success. This participation includes implementation of Direct Secure Messaging for DSS staff and the sharing of Medicaid claims data through a patient query function with the providers participating in the statewide HIN. After the HITECH grant funds are exhausted, the statewide HIN is expected to be self-sustaining and will rely on subscription fees paid by statewide HIN members including Missouri Medicaid.

To promote the use of electronic health records by healthcare service providers for quality improvement, the State of Missouri has elected to participate in the Medicaid Electronic Health Record (EHR) Incentive program funded through HITECH. MO HealthNet recognizes that provider adoption and utilization of EHRs is an initial step toward meaningful statewide Health Information Exchange (HIE) in Missouri. Eligible Professionals (EPs) and Eligible Hospitals (EHs) must meaningfully use certified EHRs and participate in health information exchange to be eligible for incentive payments. EPs and EHs participating in the Medicaid Provider Incentive Program may qualify in their first year of participation for an incentive payment by demonstrating that they have adopted, implemented or upgraded a certified EHR or demonstrated meaningful use. Incentive payments may also be disbursed to providers who demonstrate meaningful use for an additional five years culminating in 2021.[1]

[1] CMS Office of Public Affairs: 202-690-6145. CMS Proposed Requirements for the Electronic Health Records (EHR) Medicaid Incentive Payment Program. December 30, 2009.

The MO HealthNet has prepared this State Medicaid Health Information Technology Plan Update (SMHP-U) to inform the Centers for Medicare and Medicaid Services (CMS) on progress made toward establishment of the statewide HIN, and to report on outcome of the initial years of the Missouri EHR Provider Incentive Program and progress made toward achieving the vision for transforming healthcare through promotion of health information exchange and adoption and use of certified EHRs. This SMHPU represents the planning effort at this point in time and MO HealthNet will continue to develop the plan over the next one to two years as the Incentive Program moves forward and state and national health information exchange efforts are realized.

1.2 Vision for Future

MO HealthNet has developed five year goals and objectives for the Medicaid program. MO HealthNet's vision and ultimate goals for the State of Missouri are to improve population health outcomes and quality of healthcare for Missourians; using clinical information obtained through adoption, implementation, or upgrade of certified EHR technology, while ensuring provider and member access to health information through MHC's HIN.

MO HealthNet will leverage the products and services offered by MHC's HIN to improve the efficiency and effectiveness of the Missouri Medicaid Program and maximize the value of the MHC. MO HealthNet will share Medicaid claims data, making it available to healthcare providers for viewing and consumption into their EHRs to improve care coordination among providers, MO HealthNet and state agencies, including the Missouri Department of Health and Senior Services (DHSS), and the Missouri Department of Mental Health (DMH). MO HealthNet is working closely with its partners in the Missouri Medicaid Enterprise (MME) to identify opportunities to improve program administration through the exchange of health information within the MME and with Medicaid providers. These opportunities include the deployment of Direct Secure Messaging (Direct) for MME staff, the creation of an HIN within the MME to facilitate exchange of health information between partners and to manage the flow of Medicaid data through the statewide HIN, and the development of HIN functionality to support key Medicaid business functions including prior authorization and pre-certification of participant services.

As part of its work on health care reform, Missouri has begun to explore ways in which care coordination and chronic disease management efforts can be integrated into existing activities. The State has implemented a healthcare home pilot with 29 behavioral health providers targeting over 17,000 program participants with a mental health or substance abuse diagnosis and 25 primary care providers targeting over 20,000 program participants with specific chronic conditions – asthma, diabetes, and heart disease – and health risks associated with those conditions – tobacco use, weight, and blood pressure – for the purpose of preventing deterioration in existing conditions and/or development of additional conditions. In an effort to provide more timely encounter data and promote ongoing inter-agency coordination with DSS, MO HealthNet, DHSS is developing a mechanism to complete a secure daily file transfer to DSS/MO HealthNet that provides information on healthcare home participants who visited the emergency room from the available Electronic Surveillance System for the Early Notification of Community-based Epidemics ESSENCE syndromic surveillance data that provides patient and chief complaint data. The Healthcare Home providers will eventually access timelier provider encounter and clinical data for their participants through the statewide HIN and significantly improve the effectiveness of the case management and coordination of care efforts.

MO HealthNet is committed to ensuring options are available to all Medicaid health care service providers for participation with MHC for viewing/consuming clinical data ("No Provider Left Behind"). MO HealthNet objectives to improve patient care through better clinical decision support; promoting consumer engagement in their health care; making clinical data available through health information exchange and identifying opportunities for patent education, care coordination, and the management of chronic health conditions.

Refer to Section 3 for detailed description of State of Missouri's vision, goals, and objectives for future use of health information exchange.

1.3 EHR Incentive Program Administration

Missouri participated in the Centers for Medicare and Medicaid Services (CMS) Group One state activities to successfully complete required testing with the CMS Registration and Attestation (R&A) system. MO HealthNet implemented administrative activities to enable the State to accept provider enrollment through the R&A system beginning April 2011. Milestones implementation dates are shown in Table 1.

Table 1: Milestone Dates for EHR Provider Incentive Program

Milestone Dates	Eligible Hospitals	Eligible Professionals
Interface with R&A System approved	April 2011	April 2011
Launch date	April 2011	April 2011
2011 Attestation period ends	December 31, 2011	March 31, 2012
First incentive payment to providers	July 2011	July 2011
Begin collection of meaningful use stage 1 attestations	April 2012	April 2012

Missouri began accepting registrations and attestations for the EHR Incentive Program from eligible providers on April 4, 2011 and made its first incentive payments to providers in July 2011. MO HealthNet's original request for Federal Financial Participation (FFP) from February 1, 2010 through January 31, 2012 supported:

- The implementation of the Xerox Heritage, LLC State Level Registry (SLR) for processing of MO HealthNet EHR Incentive Program applications for adoption, implementation and upgrade (AIU) of certified electronic health record technology, Stage 1 attestation and to initiate Provider Incentive Payments.
- Continued support for the development of detailed program policies, operational procedures and protocols for the first year of the MO HealthNet EHR Incentive Program; and
- Ongoing planning and assessment activities to ensure readiness for the State to administer the MO HealthNet EHR incentive program in April 2011, facilitate successful

participation of eligible MO HealthNet hospitals and professionals in the program, and encourage adoption of certified EHR technology.

The Missouri HIT Assistance Center (AC) was awarded $8.7 million contract to serve as the Missouri Regional Extension Center. In June 2012, the AC surpassed its goal to assist priority primary care providers in meeting Milestone 1 and has made significant progress toward its goal of assisting those providers in meeting meaningful use by September 2013. The AC received an additional two year extension to continue its outreach and assistance to Missouri eligible providers.

MO HealthNet has continued to leverage its ongoing relationships with the AC, Missouri Primary Care Association, Missouri Hospital Association and Missouri State Medical Association to conduct effective outreach and to encourage eligible providers to adopt and use certified EHRs. These organizations, along with MO HealthNet, have been active supporters of statewide HIE planning activities. MO HealthNet continues to offer feedback and input, and participates in planning efforts as the AC and other stakeholders implement plans for physician training and outreach.

As of June 30, 2013 the State has disbursed $134,741,256 at 100% FFP, $49,863,859 for 2708 payments to 2143 Eligible Professionals (EPs) and $84,877,397 for 110 payments to 91 Eligible Hospitals (EHs). Approximately 26% of EPs and 21% of EHs returned for meaningful use payments in the first 24 months of the program. MO HealthNet originally estimated provider incentive payments would be made to approximately 550 EPs and 60 hospitals during State Fiscal Year 2012; totaling $60,000,000. This included an estimated $50,000,000 to EHs and $10,000,000 to EPs. MO HealthNet received supplemental funding for Incentive Payments to cover the greater than projected program participation.

In program year 2, the State plans to engage an audit contractor to provide oversight and conduct post payment audit activities for the Missouri EHR Incentive Program.

1.4 Changes in HIT Landscape

The Missouri health information technology (IT) and HIE landscape is characterized by a variety of public and private initiatives that while conceptualized and initiated separately, are increasingly moving toward more integration and collaboration.

The Missouri Health Information Organization (MHIO) became an independent entity and rebranded as Missouri Health Connection (MHC). MHC is a 501(c) 3 private non-profit organization with a Board of Directors representing health care leaders from across Missouri including members from state government, private health care organizations, private practice physicians, professional organizations, and consumer advocacy groups. MHC is the organization responsible for developing the process and connectivity to enable Missouri's health care community to exchange data, both statewide and nationally. There have been no significant changes or updates in MHC's ePrescribing, structured lab results and care summary exchange plans.

The MME partners have a collaborative agreement to develop and implement Health Information Technology (HIT) and the statewide HIN for their shared client base. The departments are working with the Office of Administration Information Technology Services

Division (ITSD) to develop an overall strategy for connecting the State department systems to the statewide HIN for the purposes of sharing clinical and claims data and for accessing provider data to support State program functions, including case management and coordination of care. The departments are also working with ITSD to coordinate the deployment of MHC's Direct Secure Messaging service to State staff to facilitate communications and exchange of Protected Health Information (PHI) within the MME and with health care service providers.

MO HealthNet is completing Phase 1 of a connection with the statewide HIN. Phase 1 focuses on the sharing of Medicaid claims data through the HIN in response to patient queries received from other HIN participants. MO HealthNet has executed a participation agreement with MHC and has established the connection with the statewide HIN to support the exchange of data. MO HealthNet intends to implement Phase 1 in January 2014.

The DHSS and DMH are making significant progress toward electronic health information exchange. In 2011 DHSS developed and currently supports the bi-directional exchange of immunization data using Health Level Seven International (HL7) and lab results and syndromic surveillance reporting are also available in HL7 formats. The DHSS has expanded the number of Missouri providers submitting public health data via HL7 interface. The DHSS has also established a test connection with the statewide HIN with the intent to accept reporting of public health data by the providers through the statewide HIN. The DHSS intends to implement the connection during 2014.

The DMH is implementing an Electronic Medical Record (EMR) system at eight DMH State Operated Psychiatric Hospitals. The new EMR will interface with the agency's financial system, Customer Information Management Outcomes Reporting (CIMOR) system, and support 1,144 inpatient beds and 3,500 DMH employees.

Refer to section 2 for descriptions of each department's respective technical infrastructure and environment, identified barriers to data exchange, and plans for future involvement in the statewide HIE.

1.5 Medicaid Information Technology Architecture (MITA) HIT Roadmap

MO HealthNet completed a Medicaid Information Technology Architecture (MITA) 2.01 State Self-Assessment (SS-A) in 2006 and created a MITA Roadmap focused on reengineering the Medicaid Management Information System (MMIS) to create the envisioned "To Be" business and technical architecture. Over the past six years, MO HealthNet has made significant progress on the MITA roadmap with the completion of several MMIS reengineering projects including the implementation of a rules engine to support claims adjudication. MO HealthNet also implemented a health information exchange framework within a supplemental MMIS solution referred to as the Clinical Management Services and System for Pharmacy Claims and Prior Authorization (CMSP). This framework supports the creation of Continuity of Care Documents (CCD) from Medicaid claims data for sharing through the statewide HIN.

MO HealthNet leadership believes that HIT is vital to transforming Missouri's health care system and that MO HealthNet should take a leadership role in the promotion of HIE and adoption of MHC's Direct Secure Messaging service and the Patient Query Services. Key components of this transformation include supporting adoption of certified electronic health records (EHRs), the reengineered MMIS; adoption of direct secure messaging by MO HealthNet and its partner

State Agencies, DMH and DHSS, and connecting Medicaid systems to the statewide HIN for sharing Medicaid claims.

Missouri is completing its MITA SS-A using framework 3.0. Missouri has completed a draft of the information, data, and technical architecture "As-Is" and "To-Be" assessments and is developing the MITA 3.0 5 year roadmap that includes projects designed to promote HIT adoption and facilitate the sharing of health information. Missouri anticipates completion of the MITA SS-A and finalization of the MITA 5 year roadmap by March 31, 2014.

Refer to section 6.0 for details on MO HealthNet's planned HIT projects.

1.6 Medicaid Role in HIE

MO HealthNet actively supports the overall success of MHC, the state designated HIN, including sustainability. The DSS and MO HealthNet Directors participate on the MHC Board of Directors. MO HealthNet and ITSD staff participate on workgroups to define and establish the statewide HIN including the Technical and Operations Workgroup and the Provider Registry Workgroup. MO HealthNet has aligned its goals for the EHR Incentive Program with those of MHC and will subscribe to MHC. Through provider communications and education, MO HealthNet promotes the value of the products and services offered by MHC through the statewide HIN to enable a provider in the delivery of quality and cost-effective health care services and as a means of achieving meaningful use. Additionally, MO HealthNet will share Medicaid claims data with participants in the statewide HIN allowing them to view and/or consume this data into their certified EHRs.

The projects identified in the SMHP to support the statewide HIE, including the Provider Registry; have been delayed due to a lengthy procurement process and strategic plan revisions. MO HealthNet plans to revisit appropriate activities once participation costs and requirements are understood.

1.7 Goals for Transformation of Systems

In 2012, the MHC contracted with InterSystems, a technical services partner to establish MHC's HIE services, provide the tools necessary to manage the HIN, and work with subscribers to connect. A particular focus of Medicaid was ensuring the availability of low-cost EHR solutions for small Medicaid providers that can connect to MHC.

MHC worked with InterSystems to design a phased implementation approach for MHC HIE services. Initially, the first phase was to focus on the implementation of Direct Secure Messaging (Direct). The MHC has contracted with their TSP to provide a hosted Direct solution and has successfully implemented Direct for several HIE participants. Missouri Medicaid had been planning to participate in MHC's first phase by utilizing Direct. However, a rapidly changing landscape and delays with execution of the participation agreement resulted in a change in priorities. MO HealthNet has worked with DSS, ITSD, DMH and DHSS to identify potential Direct users within the State agencies, their use cases, and a model for supporting the implementation of Direct across the agencies. MO HealthNet will identify the users and use cases offering the most value to the State and focus on those for the initial rollout of Direct. Missouri will proceed with the implementation of Direct after the State Departments have executed the MHC participation agreement.

The MHC has contracted with their TSP to provide a hosted HIE platform to support the connection of qualified organizations. The sharing of Medicaid claims data through the statewide HIE for consumption into provider EHRs has been identified by the MHC Board as a key success factor. MO HealthNet committed to participating in the alpha pilot of the patient query function by connecting the CyberAccess platform to the HIE for the purpose of sharing Medicaid claims data. MO HealthNet is participating in MHC's patient query pilot project with the initial goal of sharing Medicaid claims data through the MHC network and anticipates completing this connection in January 2014. MO HealthNet will later expand the connection with MHC to allow for bi-directional exchange of health information to support Medicaid business functions including case management and coordination of care and prior authorization and pre-certification of participant services.

DHSS has focused on the establishment of a connection between the statewide HIN and DHSS to support public health reporting. DHSS has established a test connection with the MHC to accept public health data submitted by providers through the statewide HIN. DHSS anticipates implementing the connection during 2014.

MO HealthNet, DMH, and DHSS are actively engaged in the following projects:

- Development of an enterprise strategy and technical architecture to support the exchange of health information between the state agencies and with the statewide HIN.
- Development of a strategy to deploy an enterprise Electronic Health Record for use by state agencies to manage provision of health services to Missouri citizens and to facilitate the exchange of health information between state agencies for program support.

Missouri is evaluating the options for accepting and reporting meaningful use clinical quality measures as required in the final rule for Stage 2, as well as integrating those measures into current processes to evaluate program effectiveness including Children's Health Insurance Program Reauthorization Act (CHIPRA) reporting and evaluation of our health home organizations.

2 SECTION A: MISSOURI'S "AS IS" HIT LANDSCAPE

2.1 Overview

The Missouri health information technology (IT) and health information exchange (HIE) landscape is characterized by a variety of public and private initiatives that while conceptualized and initiated separately, are increasingly moving toward more integration and collaboration. This section describes the origin of the Missouri State Medicaid Agency (MO HealthNet) and its technical environment within the Department of Social Services (DSS), as well as the environment of its two sister agencies, the Department of Health and Senior Services (DHSS) and the Department of Mental Health (DMH). Together, the three agencies are committed to a collaborative approach to supporting health IT adoption and HIE for the population of Missourians they serve. This section also describes a variety of private and public-private initiatives around the state committed to providing statewide HIE support or HIE services to a targeted region or population. These private and public-private initiatives are in relatively nascent stages of development, and limited information is being exchanged among unaffiliated providers or provider organizations in the current environment.

2.2 Missouri Medicaid: MO HealthNet

The Medicaid program was enacted by the Federal government through Title XIX of the Social Security Act in 1965 as a federal-state partnership to provide public health insurance coverage to low-income people. Approximately 60 million beneficiaries are enrolled in Medicaid nationwide. State participation in Medicaid is voluntary, though all states currently participate. Monitored by the Centers for Medicare and Medicaid Services (CMS), each state administers its respective program while receiving federal matching funds to support the program. Missouri established its Medicaid program, now called MO HealthNet, in 1967.

Administration

DSS is the single state agency charged with administration of the Missouri Medicaid program. The Governor established the Missouri Division of Medical Services (DMS) within DSS on February 27, 1985. The Missouri Health Improvement Act of 2007, effective September 1, 2007, changed the division's name to the MO HealthNet Division.

MO HealthNet is led by a director who is appointed by the director of the Department of Social Services. The division receives professional and technical consultation from a medical care advisory committee and designated subcommittees representing the major program domains. MO HealthNet's primary purpose is to purchase and monitor health care services for low-income and vulnerable Missourians. MO HealthNet has leveraged a number of tools and resources, particularly those focused on evidence-based care, to support quality health care through service delivery systems, standards setting and enforcement, and education of providers and participants.MO HealthNet also relies on consumer engagement to help guide its approach to health care delivery.

Eligibility

MO HealthNet covers Missourians below certain income thresholds. Pregnant women and infants (under age one) with incomes up to 185 percent of the Federal Poverty Level (FPL) are

eligible. Children ages one to five are eligible at 133 percent FPL. Children ages 6 - 18 are eligible at 100 percent FPL. Uninsured children with family with incomes above Medicaid standards but below 300 percent FPL are eligible for Missouri's State Children's Health Insurance Program (SCHIP), SCHIP MO HealthNet for Kids.

Table 2: MO HealthNet Eligibility Summary

MO HealthNet Eligibility Summary	
Eligibility Category	Income Guidelines
Children (up to age 19)	<300% FPL
Parents	<= 19%FPL
Pregnant Women	<185% FPL
Disabled Individuals	<85% FPL
Age 65 & over	<85% FPL
Blind Individuals	<100% FPL
Qualified Medicare Beneficiaries	<100% FPL

Elderly, blind and disabled individuals are eligible for MO HealthNet if they meet income requirements (non-spend down income limit of 85 percent FPL). Persons who exceed this limit must incur medical expenses equal to the amount their income exceeds the limit before their Medicaid benefits would take effect. Those eligible for cash assistance through the Supplemental automatically qualify for MO HealthNet on the basis of disability.

MO HealthNet also pays for Medicare premiums, deductibles and coinsurance for Medicare Part A enrollees with income up to 100 percent FPL (also known as Qualified Medicare Beneficiaries).

Enrollment

The MO HealthNet monthly enrollment in June 2009 was 778,300, representing a 3.7 percent increase from June 2008, and a 6.1 percent increase from June 2007, as represented by Figure 1. The recent economic downturn has contributed to the trend in rising Medicaid enrollment nationwide. As expected enrollment in MO HealthNet grew by 14.2 percent from 2009 to 2012; and a 17.8 percent increase between June 2007 and June 2012. A partial economic recovery in 2013 has decreased the Medicaid enrollment to approximately 860,000. MO HealthNet will be monitoring changes in enrollment that may occur as a result of implementation of Modified Adjusted Gross Income (MAGI) eligibility determination as mandated by the Patient Protection and Affordable Care Act (ACA). Missouri has not elected to implement the Medicaid expansion allowed for by the ACA.

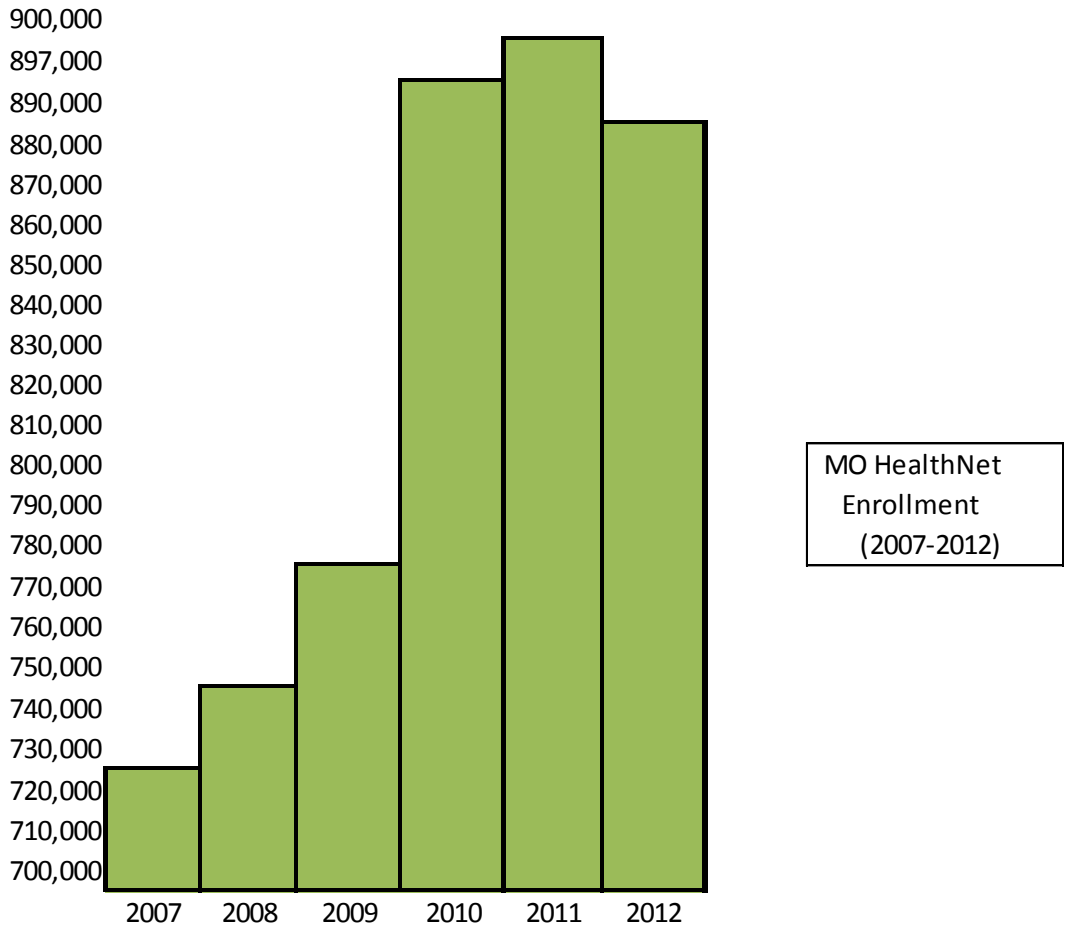


Figure 1: MO HealthNet Enrollment (2007 -2012)

In addition to mandatory services required by the Federal government, MO HealthNet optional benefits include pharmacy services, rehabilitation and specialty services, mental health services (may be federally mandated in some instances), psychiatric care, in-home care, and dental services.

MO HealthNet is comprised of several programs. The following six cover approximately 95 percent of MO HealthNet enrollees.

- MO Health Net for the Aged, Blind or Disabled (MHABD): For eligible seniors, disabled, and/or blind persons.
- Qualified Medicare Beneficiary (QMB): Covers Medicare premiums, deductibles, and coinsurance for eligible persons enrolled in Medicare Part A with incomes up to 100 percent FPL.
- Medicaid MO HealthNet for Kids: For children up to age 19 whose family income meets Medicaid eligibility requirements

- SCHIP MO HealthNet for Kids: Funded by CHIP, Medicaid MO HealthNet benefits (excluding non-emergency medical transportation) to children whose families' income is too high to qualify for MO HealthNet for Kids but below 300 percent FPL.
- MO HealthNet for Families (MHF): For low-income families with children.
- MO HealthNet for Pregnant Women: Coverage for low-income pregnant women.

Waivers

Sections 1115 and 1915 of the Social Security Act permit the Federal government to waive certain provisions of Medicaid and CHIP statute in order to foster state innovation in health care delivery and cost containment. Missouri administers several waivers, including:

- **Department of Health and Senior Services Waivers (1915(c)):**
  - **Medically Fragile Adult Waiver:** Services for individuals age 21 and older who have serious and complex medical needs and are no longer eligible for home care services available under the Healthy Children and Youth Program.
  - **Adult Day Care Waiver:** Adult day care services for individuals 18 through 63 years of age who otherwise would be institutionalized in a nursing facility.
  - **Aged and Disabled Waiver:** In-home services (homemaker, chore, respite, adult day care, home-delivered meals, etc.) to seniors who would otherwise require nursing home care.
  - **AIDS Waiver:** In-home services to enrollees with HIV/AIDS who would otherwise require nursing home care.
  - **Independent Living Waiver:** An extension of the Consumer-Directed State Plan Personal Care program that provides additional personal care services for participants with more extensive needs above and beyond the average monthly nursing home cost cap.
- **Department of Mental Health (DMH), Division of Developmental Disabilities Waivers:** Five related 1915(c) waivers (Comprehensive, Community Support, Missouri Children with Developmental Disabilities, Autism, and Partnership for Hope Waivers) that offer services to individuals with mental retardation and/or developmental disabilities that would otherwise require placement in an Intermediate Care Facility.
- **MO HealthNet Managed Care (1915(b)) Waiver:** Health care services through a managed care delivery system. All beneficiaries residing in a managed care county are required to enroll in managed care, except individuals who receive SSI disability payments, meet the SSI disability definition, or receive adoption subsidy benefits (see Figure 2 for these counties). Exempt individuals may decide whether to receive services on a fee-for-service basis or through managed care. Enrollees not in a managed care county receive benefits on a fee-for-service basis.

- **Women's Health Services Program (1115):** Family planning and family planning-related services to women, ages 18 through 55, who have family income at or below 185 percent of the Federal poverty level (FPL), and assets totaling less than $250,000, and who are not otherwise eligible for Medicaid, the Children's Health Insurance Program (CHIP), Medicare, or health insurance coverage that provides that provides family planning services.
- **Gateway to Better Health (1115):** Pilot project to provide primary and specialty care to low income, non-Medicaid, uninsured residents of St. Louis City and St. Louis County.

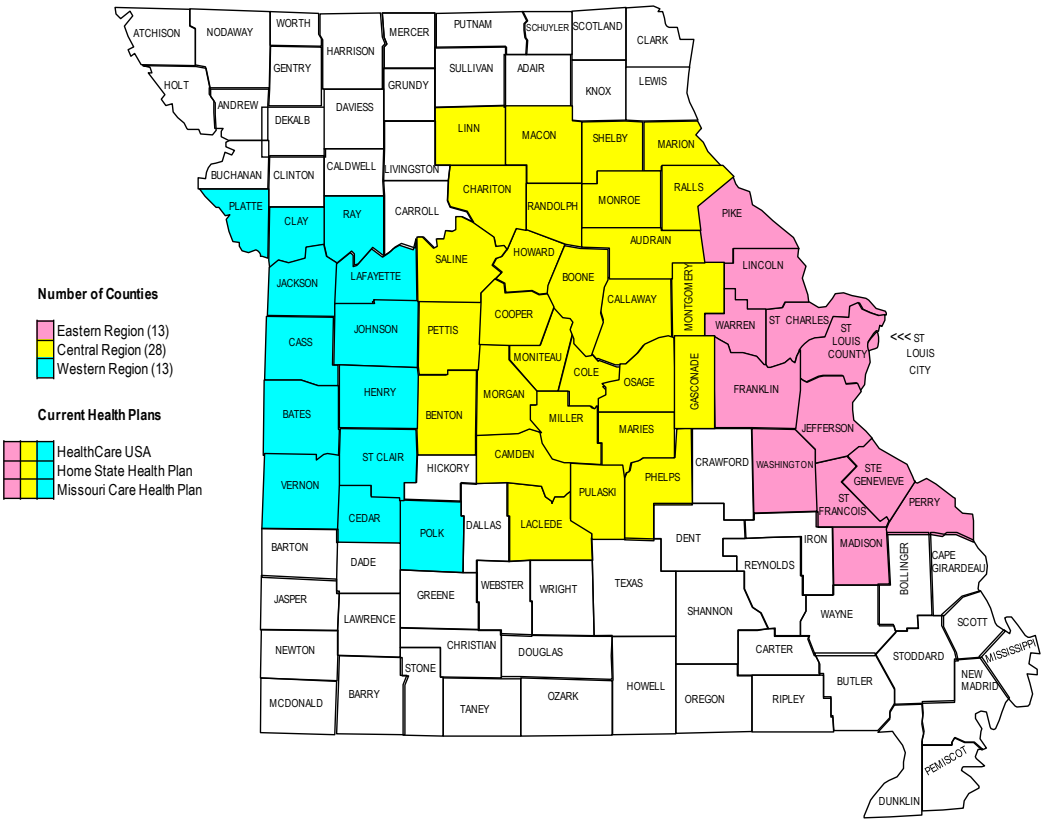


Figure 2: MO HealthNet Managed Care Regions Effective 7/01/2012

2.3 State of Missouri Technical Infrastructure & Environment Overview

The DSS MO HealthNet Division (Medicaid), DHSS, and the Department of Mental Health (DMH) have a collaborative agreement to develop and implement health IT and HIE for their shared client base. The departments are working with the Office of Administration ITSD to develop an overall strategy for connecting the State department systems to the HIE for the purpose of sharing clinical and claims data and for accessing provider data to support State program functions including case management and coordination of care. The departments are

also working with ITSD to coordinate the deployment of MHC's Direct Secure Messaging service to State staff to facilitate communications and exchange of Protected Health Information (PHI) with health care service providers.

Below is a brief description of each department's respective technical infrastructure and environment.

2.3.1 Medicaid Technical Infrastructure & Environment

Medicaid Management Information System (MMIS)

MO HealthNet receives claims for medical services performed by fee-for-service providers and encounter data submitted by managed care health plans. The primary MMIS is a computerized claims processing system that assists the MO HealthNet staff with the claims and encounter processing, provider payment, and reporting business functions including recording, sorting, classifying, and adjudicating claims, issuing and reporting (weekly, monthly, quarterly, annually and ad-hoc). Guidance for the development and maintenance of the MMIS is provided by the Federal government's Centers for Medicare and Medicaid Services (CMS) – see https://www.cms.gov/MMIS/ and http//www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Data-and-Systems/MMIS.html.

The current primary MMIS solution was implemented in 1979 and has gone through many modifications over the past 32 years. The MMIS core is a mainframe system. The MMIS processes a wide variety of payments, including those for Medicaid managed care capitation and disproportionate share. It is also responsible for processing crossover claims. Web portals have been created to facilitate system interactions for State staff and providers.

Providers submit either electronic HIPAA-compliant Electronic Data Interchange (EDI) transactions or direct data entry through a web portal or paper claims. Approximately 99% of all claims are submitted electronically. Paper claims are scanned or manually entered into the MMIS. Once claims are in the MMIS, various batch processes and jobs are used to complete the claims adjudication payments, and other processes. On an annual basis, the current MMIS processes over 95 million claims received from over 800 claims transactions submitters representing an average of over 8,000 providers in each payment cycle. The average claims processing time from submission to processing for payment is 0.58 days.

The MMIS has been modified and enhanced numerous times to add new components and functionality. Most recently, the current MMIS contract included 19 separate enhancements to the MMIS including migration to a relational database and implementation of a rules engine. These enhancements have lengthened the useful life of the existing system but additional enhancements are needed to create a system capable of meeting conditions and requirements established by the CMS. In October 2013, MO HealthNet completed the second phase of a project to convert from VSAM to the IBM DB2 relational database.. MO HealthNet had already completed the first phase of the implementation of the Fair Isaac Blaze Rules Engine. The first phase focused on moving all business rules related to claims adjudication from code into the Rules Engine. MO HealthNet is starting the second phase in January 2014 which will focus on pricing, Third-Party Liability (TPL), claim attachments, and claim history.

The current Missouri MMIS Fiscal Agent is Wipro Infocrossing, Inc., who is responsible for the maintenance, operation, and development of the primary MMIS. The current Fiscal Agent contract began in 2007. The primary services provided by Wipro Infocrossing under the Fiscal Agent contract are as follows:

- Development, operation, and maintenance of the MMIS including the provider and MO HealthNet portals, claims processing, financial subsystem, and provider enrollment
- Hosting of all system hardware
- Development, operation, and maintenance of the Decision Support Systems including Ad Hoc Reporting, Surveillance & Utilization Review, and Management and Administration Reporting
- Prior Authorization and Pre-Certification of Participant Services
- Operation of the Participant Services, Provider Relations, and Clinical Authorizations (Pharmacy, Medical, Psychology) Call Centers and the MMIS Help Desk
- Managed Care Enrollment Broker
- Third Party Liability Cost Avoidance
- Issuance of Medicaid Participant Identification Cards
- Distribution of provider manuals
- Mailroom and Data Entry
- Imaging of all paper documentation
- Project Management services

The primary provider portal is referred to as eMomed. This portal supports approximately 42,000 users representing over 38,000 providers and over 20 million hits per month. While the portal is on a separate platform than the MMIS, the two are fully integrated. eMomed provides prescribers and other trained users with 24-hour web access to eligibility and claims-related data and functions, including:

- Claims and attachment entry
- Claims/eligibility batch submission
- Insurance exchange for coordination of benefits
- Real-time inquiries to send and receive HIPAA-compliant transactions, including:
    - Member eligibility inquiry
    - Claims payment status inquiry
    - Member enrollment
    - Premium payment and remittance
    - Pharmacy transactions
    - Printable remittance advices (aged and current)

- Claim confirmations
- Eligibility-related provider updates and confirmations

Published reports are also available from eMomed. Available information includes Medicaid manuals, claims processing schedules and instructions, and downloadable forms. Users also have access to provider check amounts and the claims process schedule for the current fiscal year.

The eMomed portal does not currently serve as an Electronic Health Record (EHR) nor does the MMIS currently support HIE compliant interfaces or create the Continuity of Care Documents (CCD) required by the Health Information Exchange.

Clinical Management Services, Pharmacy, and Prior Authorization System (CMSP)

In 2001, MO HealthNet committed to the development of a supplemental MMIS solution referred to as the Clinical Management Services and System for Pharmacy Claims and Prior Authorization (CMSP) to automate clinical editing and prior authorizations of services provided to Medicaid participants. Subsequently, the CMSP solution was expanded to provide a web portal allowing providers to view Medicaid claims as a support to coordination of care within the Missouri Medicaid Program. The CMSP solution has also been expanded to provide a solution for managing the Missouri Medicaid EHR Incentive Program.

MO HealthNet currently contracts with Xerox Heritage, LLC for the maintenance, operation, and development of the CMSP. The primary services provided by Xerox Heritage under the CMSP contract are as follows:

- Adjudication of claims using clinical and pharmacy edits
- Generation of clinical letters
- Automated and manual pre-certification of Optical, DME, Radiology and Psychology services
- Automated and manual pre-certification of inpatient services and determination of length of stay
- Support the internal case management and coordination of care services
- Automated and manual pre-certification of outpatient Radiology services performed on advanced imaging technologies
- Portal allowing providers access to Medicaid claims history and tools including e-prescription and medication possession ratio
- Personal Health Record portal for Medicaid participants
- Medication Therapy Management and Immunization Billing
- Home and Community Based Services portal and management tools
- Decision Support Systems

Other CMSP tools are interfaced to the Pharmacy Point of Sale (POS) system and are used in monitoring and processing pharmacy, behavioral health, and medical services requests. For

example, the Plan of Care tool is used to manage Chronic Care Improvement Program (CCIP) participants; care management functions enable intensive patient tracking among Care Coordinators/Nurse Managers for ongoing support. Providers can also access the Plan of Care through CMSP web-based tools.

CMSP uses a licensed product called CyberAccess℠. Over 13,000 providers (representing 82 percent of Medicaid participants) have been trained on the CyberAccess web portal. The CyberAccess tool is currently capable of creating Continuity of Care Documents (CCDs) containing the Medicaid medical and pharmacy claims data for sharing through the HIE. Additional functionality will be added to filter the claims data to comply with restrictions in federal and state law on sharing certain types of data without additional patient consent beyond the HIPAA-defined consent required for treatment, payment, and operations. The CCDs will be available through a web-service that can be accessed by the HIE.

The CyberAccess tool will also be modified to allow users to query and retrieve clinical data through the HIE and consume the data into the CyberAccess database.

Point of Sale Pharmacy and Rebate System

The POS pharmacy and rebate system functionality are fully integrated into the MMIS. Drug claims are received from a pharmacy through a switch vendor to the MMIS; the MMIS subsequently performs participant and provider eligibility verification and forwards the claim to CMSP for clinical and fiscal edits, prospective drug utilization review (proDUR) editing, edit override functions, and prior authorization review. Following completion of any front-end edits and any necessary prior authorization review, a decision to pay or deny the claim is routed back to the MMIS. Drug claims are processed in real-time; pharmacies receive a response within an average of three seconds.

MO HealthNet's current claims processing system allows each claim to be referenced against the participant's drug claims history, medical claims history (including ICD-9-CM) and procedural data (CPT codes). In addition to claims approval/denial and reimbursement information, pharmacy providers receive prospective drug use review alert messages for an individual participant at the time the prescriptions are dispensed.

Departmental Client Number (Common Identification Number)

In the early 1980s, the DSS started assigning a Departmental Client Number (DCN) to individuals served by certain programs. Other DSS programs started using the DCN to identify clients, including Medicaid participants. An electronic common area was established on the mainframe to hold basic client information; the DCN became the unique identifier for these clients. The Women, Infants and Children (WIC) program (administered by DHSS) started using the DCN to identify clients and household members. In the early 1990s, when DHSS began to develop a client-centered integrated data delivery system, the Missouri Health Strategic Architecture and Information Cooperative (MOHSAIC), the decision was made to use the common area to look up clients for MOHSAIC. It was also decided that if a client entered into MOHSAIC did not already have a DCN, then one would immediately be assigned by DHSS and the information would be put in the common area for use by both agencies. In 1994, DHSS began assigning DCNs to every child born in Missouri. The information is stored in the common

area with the proper security measures in place, allowing interoperability between data systems and enabling DSS and DHSS to share information about Missouri clients.

2.3.2 Department o f Health and Senior Services Technical Infrastructure & Environment

The public health system in Missouri is comprised of DHSS, 114 local public health agencies, and multiple partners, such as health care providers, that work together to protect and promote health. The system development at DHSS is in compliance with the Public Health Information Network (PHIN) standards that provide a framework for the structure and integration of systems for disease surveillance, national health status indicators, data analysis, public health decision support, information resources and knowledge management, alerting and communications, and the management of public health response. The heart of the DHSS technical infrastructure is MOHSAIC, which offers a range of features and functionality to support the work of many of the state's health care providers. MOHSAIC is interoperable with DSS, allowing MOHSAIC to query Medicaid information and to share data on individuals served.

Over time, DHSS has added a range of program components to MOHSAIC, thus realizing the initial concept for an integrated data delivery system. The following applications are included in MOHSAIC, immunization, environmental surveillance, WebSurv (communicable disease surveillance), service coordination, genetics and newborn screening, family care safety registry, home visiting, and child care. In addition, DHSS maintains separate, stand-alone systems to support required public health and Centers for Disease Control and Prevention (CDC) surveillance and reporting (e.g., sexually transmitted infections, HIV). The following are brief descriptions of systems and statistical reports available to providers and the public through these systems:

Missouri Health Strategic Architecture Information Cooperative (MOHSAIC) system

In the early 1990s, DHSS developed a strategic plan for information systems that included a client-centered integrated data delivery system. In this system, a client could receive services from more than one public program, but instead of having to give their name and other demographic information with each new service, the integrated data system retained these data after clients registered with DHSS. In 1994, the first phase of MOHSAIC was implemented and contained common demographics, appointment scheduling, inventory, and immunization/TB components. In order for local public health agencies (LPHAs) to gain access to the system, DHSS created a statewide network that consolidated access to MOHSAIC, Vital Records and WIC applications.

MOHSAIC continues to provide a statewide network, software and integrated database that allow access to client information to sites that provide health services to Missourians (e.g., LPHAs, private providers, hospitals). It collects and stores information on clients, providers and services and creates an electronic public health record for those receiving DHSS health care services in Missouri. The record includes screening results for metabolic, newborn hearing, cancer, and environmental conditions and information from reportable conditions. Data are also included on services provided for head injury, communicable diseases, and service coordination.

MOHSAIC Common Area

The MOHSAIC database common area is the true "hub" of the system. The common area includes client information (e.g., DCN, demographics, household information, address) as well as provider data. Like it does for clients, this efficiency allows providers to avoid re-entering information for each MOHSAIC application. The MOHSAIC common area also includes functionality used by multiple applications, including geocoding, security, and claims processing. In addition, DHSS is able to connect to the DSS common area, in order to access DHSS client information through the client's assigned DCN.

Data Exchanges/Loads and Public Health Information Network (PHIN)

When the MOHSAIC concept was first developed, it was created primarily as a data entry system, with limited focus on data loads or exchanges. This was because most entities did not have robust enough data systems to support such activities. MOHSAIC is no longer primarily a data entry system, but more of a data delivery system. DHSS currently receives data electronically from 100 hospitals and four laboratories in Missouri. Most of this data exchange is in real-time HL7 reporting. DHSS receives an electronic transmission of immunizations included in billing data processed by Medicaid and Gateway EDI for their participating providers. Data is also exchanged with the CDC on a daily basis. DHSS participates in the CDC Public Health Information Network (PHIN). The PHIN is a national initiative designed to improve the capacity of public health entities to use and exchange information electronically by promoting the use of standards and defining functional and technical requirements. PHIN strives to improve public health by enhancing research and practice through best practices related to efficient, effective, and interoperable public health information systems. All CDC-funded components in MOHSAIC are PHIN-compliant.

Meaningful Use Activities

The Meaningful Use Stage 1 and Stage 2 inclusion of public health reporting requirements to receive incentive payments to eligible professionals (EPs) and eligible hospitals (EHs) as they adopt, implement, upgrade or demonstrate Meaningful Use (MU) of certified electronic health records (EHR) technology has significantly increased the number of providers working toward ongoing submission of data to DHSS.

In order to establish consistent policies for MU implementation for submitters, DHSS established a cross program/cross agency workgroup, the Missouri Public Health Information Exchange (MOPHIE) to coordinate the planning, implementation and communication for MU to decrease duplication of effort and enhance outreach efforts. A DHSS Meaningful Use website has been established to provide EHs and EPs with registration of intent, information on reporting requirements, implementation guides and state regulations.

DHSS is currently able to receive and consume into DHSS applications electronic messages utilizing HL7 for immunizations, electronic laboratory reporting, and syndromic surveillance as the public health agency (PHA) for Missouri. Submission of data for the cancer registry and other specialized registries is under development. Additional information on electronic data submission:

Immunizations - ShowMeVax is the web-based immunization registry that offers Missouri's health care professionals the ability to manage clients, track, submit and retrieve immunization records and manage vaccine inventory. As of September 2013, over 32 million immunizations have been administered to over 3.3 million individuals and have been recorded in ShowMeVax through direct data entry and electronic data exchanges. There is ongoing electronic submission of immunization data in HL7 by 214 sites and an additional 200 facilities are working toward an operational interface. The bi-directional immunization interface has been built and is in production for nine sites. More than 1.5 million doses of vaccine have been entered into the immunizations registry through HL7 messages in 2013.

Syndromic Surveillance - There are 100 hospitals and urgent care clinics in Missouri, Kansas and Illinois that report syndromic surveillance data on a real-time or daily basis. On a daily basis, 85,000 to 90,000 HL7 messages are received and processed. The data is imported into ESSENCE, (Electronic Surveillance System for the Early Notification of Community-based Epidemics) software that groups chief complaints from electronic ED data into 'syndrome' categories. This information is used to determine if the number of visits is greater than expected for that facility based on historical data. Data collected by DHSS for syndromic surveillance is also provided to the CDC Biosense 2.0 public health surveillance system.

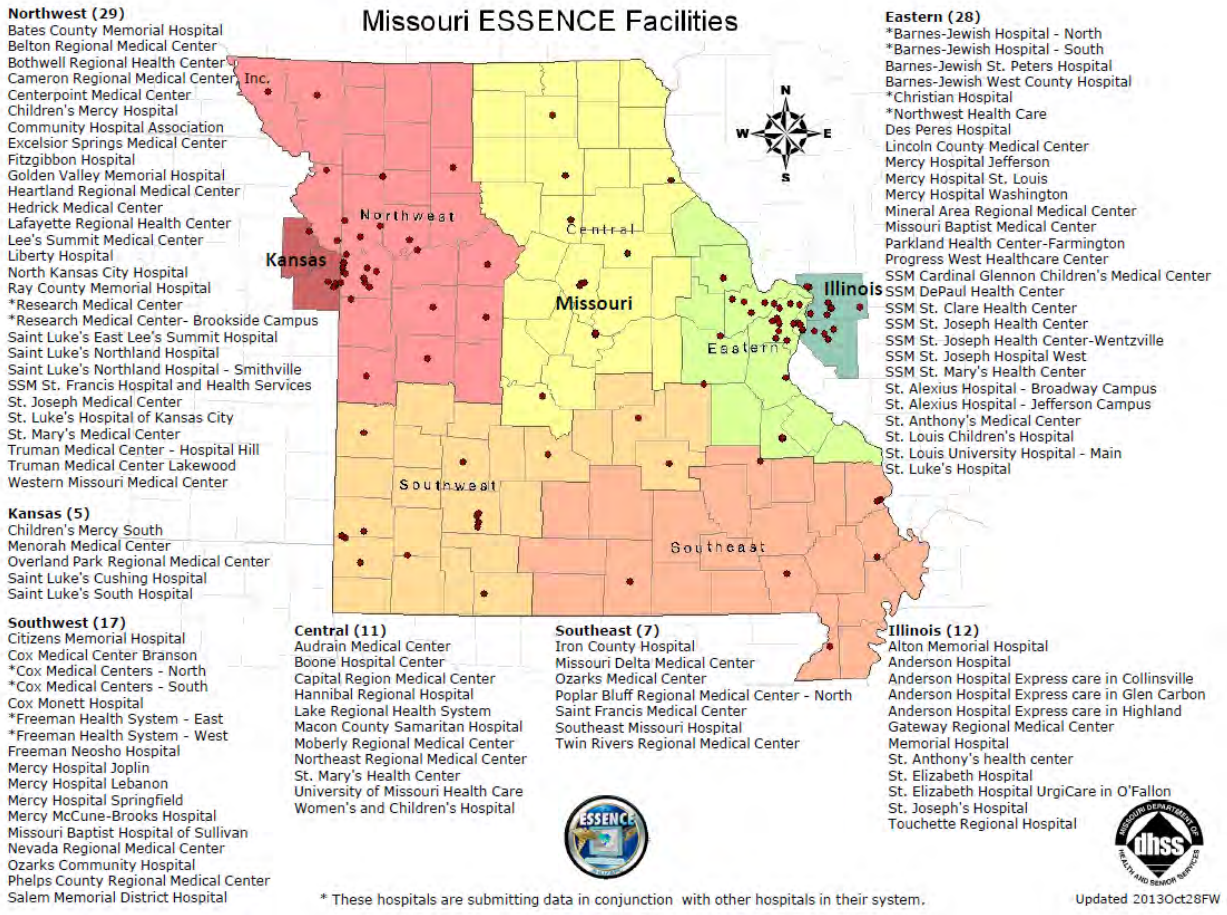


Figure 3: 2013 Syndromic Surveillance Hospital Map for Missouri

Electronic Laboratory Reporting - Three national laboratories are reporting electronic laboratory results that are being consumed by the surveillance applications (WebSurv and EnvSurv). DHSS is working with six additional labs to develop an ongoing interface and additional laboratories have contacted the (electronic laboratory reporting) ELR team to begin the on boarding process. The data is used for disease outbreak investigation, emergency response, environmental and communicable disease surveillance, and reporting to our federal and state partners.

DHSS Public Health Profile

In order to provide a more rapid summary of the public health information included in MOHSAIC to relevant health care providers, DHSS developed a web-based summary application, the Public Health Profile. This function allows providers to type the profile URL into a web browser,

enter their user ID and password, and look up a client. The profile summarizes information about the client's immunization status, newborn blood spot, newborn metabolic, hearing and lead testing results, as reported to DHSS. While still in its pilot phase, the application also provides an indicator when additional follow-up for these conditions are due, and shows documented allergies. This allows DHSS providers a "one-stop shop" for client information reported to DHSS, instead of having to look-up the information in several different MOHSAIC components with different user IDs and passwords (see Figure).

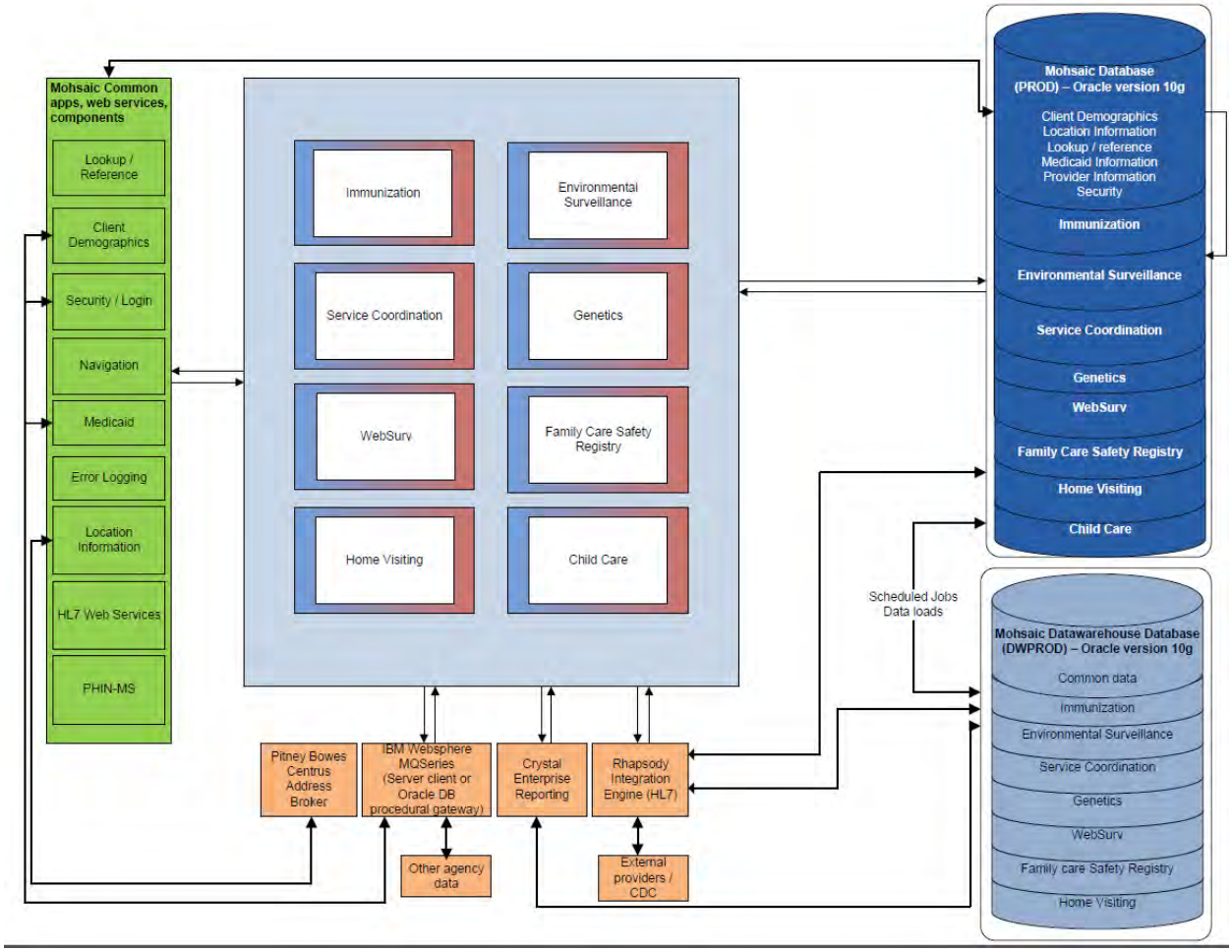


Figure 4: DHSS MOHSAIC, Common Area, Data Exchanges/Loads, Public Health Information Network and DHSS Public Health Profile Graphical Layout

2.3.3 Department of Mental Health Technical Infrastructure & Environment

Customer Information Management, Outcomes, and Reporting (CIMOR) system

DMH facilities, providers and regional offices are supported by the Customer Information Management, Outcomes, and Reporting (CIMOR) system. As the DMH corollary to MOHSAIC,

CIMOR is an enterprise medical information system that collects and stores a wide range of information used in supporting the DMH business areas, including:

- Identifiers: Various identifiers and reporting capabilities to track general information about organizations that are part of, or do business with, DMH.
- Consumer Information: Demographics, Medicaid eligibility, admission and discharge information, as well as services that are collected within a given episode of care.
- Bed Management: Inpatient facility bed availability and billing calculations for consumers based on populating beds.
- Billing: For example—authorizations, encounters, vouchers, waiver—based on delivery of services or encounters for payers (e.g., Medicaid, Medicare, private insurance, etc.).
- Fiscal Management: Handles the distribution of state funding (e.g., appropriations, allotments, allocations).
- Human Resources: General staff information.
- Consumer Banking: Many inpatients require banking functions to pay for services or for personal items.
- Event Management & Tracking: Handles tracking of incidents that may result in the compromise of a consumer's safety. Details of incident investigation, individuals involved and follow on progress of the incident are logged into this area.
- Assessments/Screenings: Clinical information (e.g., assessments, screenings), results, follow on diagnoses, and treatment plans.

CIMOR is used extensively for processing DMH provider payments; using a scalable framework, it is the goal of the CIMOR system to integrate the various clinical, financial, and administrative data from all divisions and make it viewable by authorized users throughout the department.

In addition, integration with other Missouri departments and divisions is being addressed. For example, approximately 50 percent of DMH patients are Medicaid-eligible; data for this patient population is being integrated into CMSP, making it possible for mental health clinicians to view Medicaid and mental health services and drugs provided to patients for better care coordination. Figure represents CIMOR's interactivity with other entities.

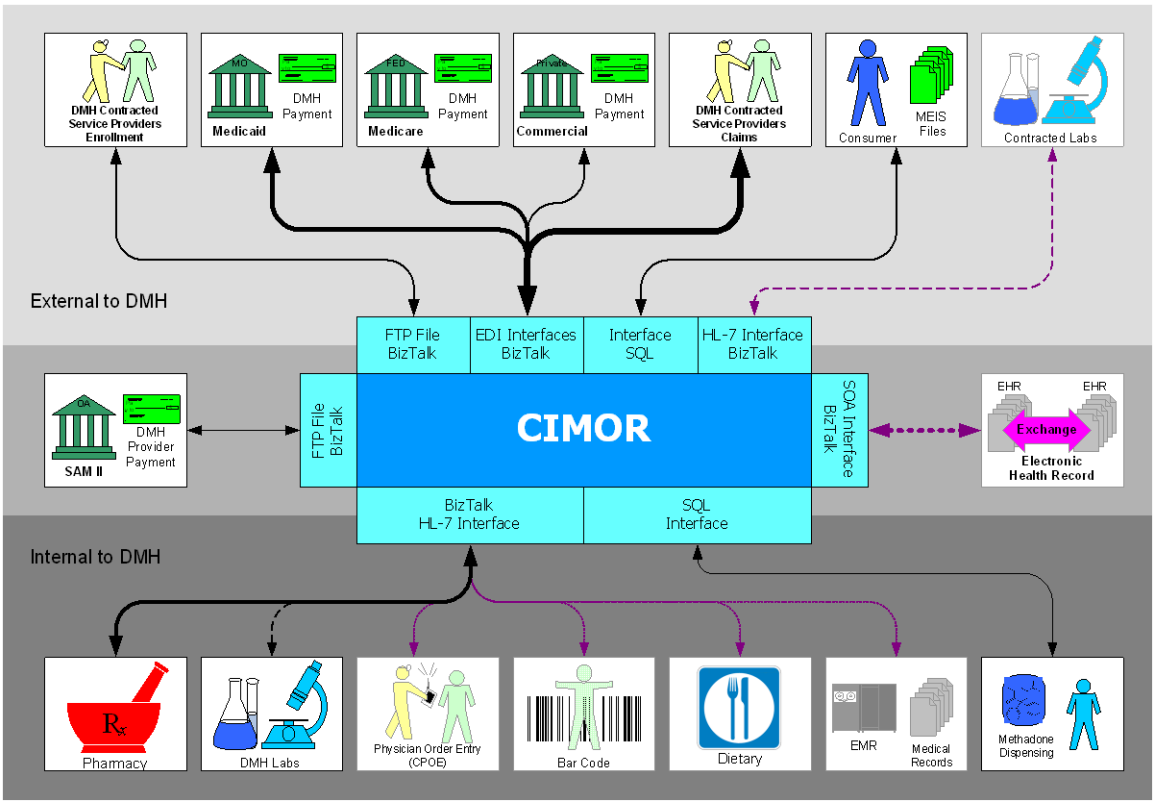


Figure 5: CIMOR Interfaces

Electronic Medical Record

The Department of Mental Health is implementing an Electronic Medical Record (EMR) system at eight DMH State Operated Psychiatric Hospitals. Panacea EMR is a customized Electronic Medical Record system developed by Mindfulware, Inc. for the Department's Comprehensive Psychiatric Services Division. The EMR application computerizes the management of patient health information records, replacing the paper based processes and manual work-flow currently in use. The EMR can potentially improve service delivery efficiency and reduce medical errors by standardizing processes and clinical reporting.

Panacea consists of five core modules: Treatment Plans, Progress Notes, Bio-Psycho-Social Assessments, Scheduling and Nursing Flow Sheets. The system automates work-flow between the various steps from initial assessment to treatment planning to patient analyzing patient data to predict and potentially prevent adverse events. Patient stats, vitals and progress metrics will be available to clinical staff through a real-time EMR Metric Scorecard.

The Panacea EMR will interface with Departments Facility Billing System, CIMOR, EMT2, Integrated Risk Assessment, Pharmacy, contracted Labs, Dietary, Computerized Physician Order Entry (CPOE) devices, the State Health Information Network (HIN) and several other Facility based applications using HL-7 messaging and the Data Warehouse. Panacea EMR is a

web-based application written in PHP running on a Linux server. The EMR will support 1,144 inpatient beds and will be used by over 3,500 DMH employees.

2.4 EHR Adoption

EHR adoption by MO HealthNet providers is crucial to achieving Missouri's goals for high-quality, cost efficient care. Currently there is no comprehensive resource that tracks or measures EHR adoption among the state's health care providers. There have been several surveys conducted by industry and trade associations providing a subset of adoption information for either providers or hospitals. These data indicate that although health IT has been incorporated into many practice settings, progress toward fully implemented systems must still be made.

In an effort to develop a comprehensive understanding of EHR adoption among all Missouri providers, MO HealthNet conducted a statewide health IT survey in the fall of 2010. A joint effort of MO HealthNet and MOHITECH (Missouri Office of Health Information Technology), the survey was disseminated to all Missouri licensed hospitals, physicians, nurse practitioners, physician assistants, certified nurse midwives, and dentists. The web-based instrument was fielded in September and October 2010 to gather information about the current use of health IT systems, plans for EHR adoption, and likelihood of participation in the EHR Incentive Program. While a preliminary analysis has been conducted, more in-depth studies will include examination by geo-code and provider type to enhance MO HealthNet's understanding of the state's providers. Preliminary findings are currently being shared with stakeholders to inform planning and implementation efforts. For example, MO HealthNet provided the MO HIT Assistance Center with a subset of the data for practices with fewer than 10 physicians, rural health centers, and Federally Qualified Health Centers (FQHCs) for use in planning and outreach efforts.

Missouri contracted with the survey firm Adams-Gabbert, the same firm used by the State of Kansas, to conduct its provider survey. Kansas and Missouri collaborated on the procurement process, using similar survey instruments and processes for data collection. MO HealthNet will leverage the provider survey to facilitate communication to providers and encourage enrollment in the Medicaid EHR Incentive Program. The survey instrument is included in Appendix 6.2.

Approximately 2,122 surveys were completed, representing 9,320 physicians (33 percent of the state's total physicians). Respondents could complete the survey for multiple health care professionals. Therefore, "total responses" represents the number of surveys completed while "total clinicians" represents the number of clinicians that were represented by the survey. (The survey methodology required respondents to provide National Provider Identifiers for every provider represented by a single submission.)

A central goal of the survey was to assess the level of EHR adoption among Missouri providers. In this regard, Table 3 reflects that 32 percent of respondents (representing 5,197 physicians) reported that their organization used an EHR,

Table 3: EHR Adoption among Respondents

	Total Responses	Total Clinicians
Yes	604 (32%)	5197 (64%)
No	1285 (68%)	2932 (36%)
Total	1889	8129

As Figure indicates, hospital respondents reported the highest use (64.7 percent) of EHRs, followed by physician or dental practices (34.9 percent).

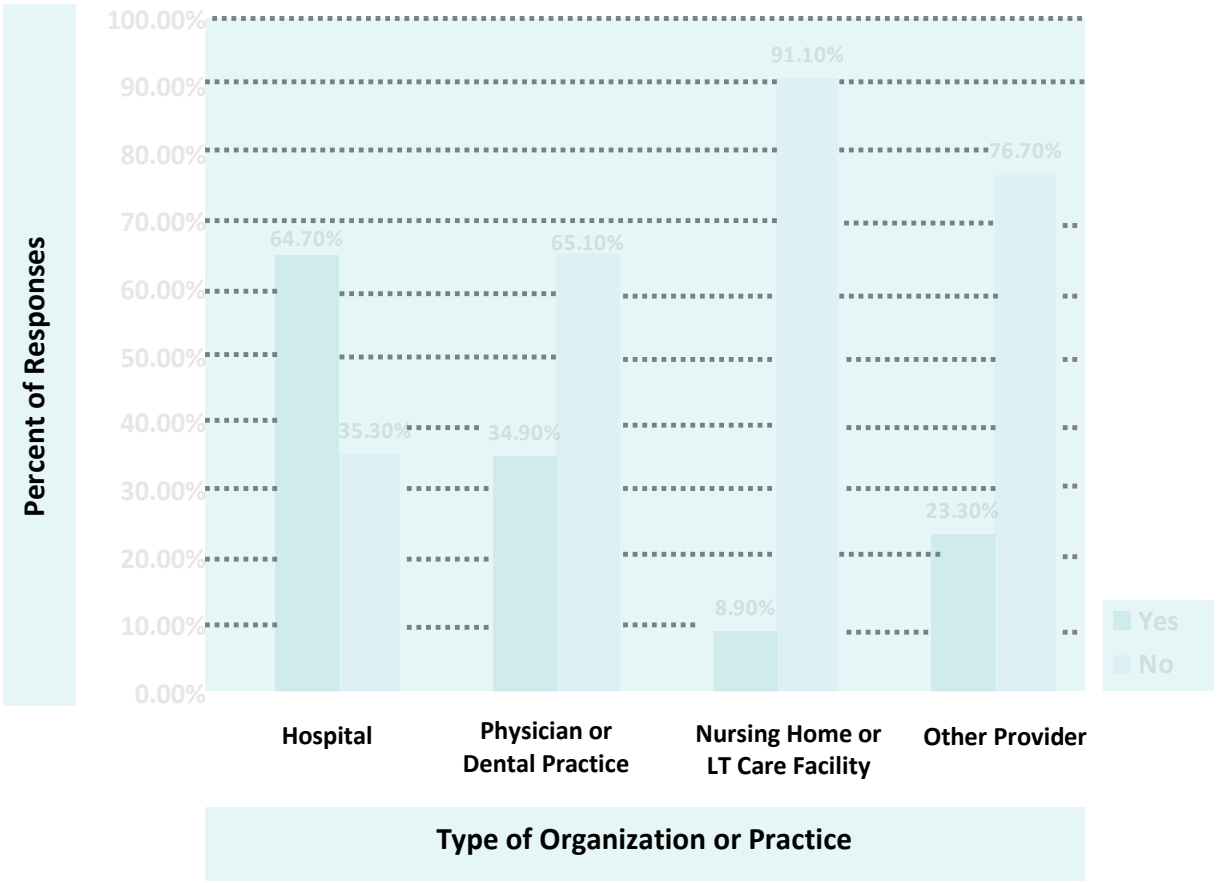


Figure 6: EHR Adoption among Survey Respondents (by provider type)

Survey respondents who had not adopted EHRs and/or were not planning to adopt an EHR in the future were asked to identify barriers to adoption. Top barriers include the expense associated with EHRs, decreased productivity and confusion over the ideal product. The most common barriers identified by respondents are listed in Figure 7. MO HealthNet anticipates the services provided by the Missouri HIT Assistance Center will address several of the most

frequently cited barriers for EHR adoption. For example, the Center is working with a Group Purchasing Organization (GPO) to secure lower-cost contracts and pricing arrangements; these agreements will be available to providers who receive services from the Center. Kansas's Regional Extension Center is working with the same Group Purchasing Office.

	Count	Percent of respondents
Too expensive	311	56%
Decreased Productivity during implementation resulting in decreased revenue	228	41%
Confusing number of EHR choices	222	40%
Staff does not have the expertise or technical capacity to use an EHR	129	23%
Fear of transition	102	18%
Other	101	18%
Concern that EHR choice will quickly become obsolete	88	16%
EHRs lack of interoperability with other systems resulting in high interface costs	82	15%
Privacy and security concerns, including HIPAA	81	15%
Limited resources	79	14%
Limited Broadband access	71	13%
Staff is satisfied with paper-based records system	49	9%
No currently available EHR product satisfies our needs	41	7%

Figure 7: MO HealthNet Provider Survey Results: Barriers to EHR Adoption

The survey also sought to measure a number of important elements relative to Medicaid EHR Incentive program planning, including interest in Medicare and Medicaid incentives, levels of health IT adoption, and the utility of an interest in technical assistance services, such as those provided by the Center. As Table 4 indicates, 186 survey respondents (of a total 596 who answered this question) indicated their interest in applying for the Medicaid EHR incentives.

Additional analysis of the survey data can be found online at http://www.dss.mo.gov/mhd/ehr/ (see *MO HIT Survey Results* and *MO HIT Survey Results Abbreviated*).

Table 4: Respondents and EHR Incentives

Plan to Apply for Incentives	Survey Respondents
Medicare Incentives	277
Medicaid Incentives	186
Do not plan to seek incentives	10
Unsure	123
Total	596

2.4.1 Physicians

Prior to the statewide MO HealthNet provider survey, several surveys had been conducted to measure physician adoption of EHRs. MO HealthNet is currently working with stakeholders to understand how earlier survey data may be cross-referenced against the more recent statewide survey and help to better understand the overall provider landscape in Missouri. Physician specific surveys and respective results are described briefly below.

In 2009, the Missouri Academy of Family Physicians (MAFP) conducted a survey of its membership, finding that, of physicians surveyed:

- 54 percent were utilizing an EMR in their office
- 18 percent planned to use an EMR soon
- 85 percent cited continuing medical education sessions addressing EMR issues as somewhat or very important

The Missouri HIT Assistance Center (the Center), the federally designated Regional Extension Center (REC) for the State of Missouri, conducted an electronic survey in early 2010. As of February 18, 2010, 280 individuals had responded. The majority of those who responded (175) reported that they practiced in settings with 10 or fewer prescribers. Forty percent of respondents indicated their practice was completely electronic, while 32 percent reported their practices used a combination of electronic and paper records. Another 9 percent reported that they were in the process of EHR implementation.

The relatively small survey size and requirement for an electronic response, likely indicates that the Center's survey results are not broadly applicable to the entire Missouri provider landscape, and likely more representatives of those providers who are "early adopters" of technology and EHRs. It is interesting to note that the Assistance Center's survey results are consistent with the CDC's 2009 National Ambulatory Medical Care Survey (NAMCS). Of the physicians surveyed:

- 44 percent were using full or partial EMR/EHR systems
- 20 percent had systems that meet the criteria of a basic system
- 6 percent were using a fully functional system

2.4.2 Hospitals and Hospital Systems

The Missouri Hospital Association (MHA) conducts an annual survey of the state's 155 hospitals, including the state's critical access and rural hospitals, assessing EHR adoption and

implementation relative to ONC criteria. As of 2008, the majority (over 100) of those hospitals reported some basic level of EHR implementation; only 24 hospitals reported no implementation efforts; the responses are consistent with the results obtained in the MO HealthNet survey. Figure depicts the level of adoption among Missouri's hospitals in five ONC categories and the corresponding criteria upon which hospital EHR implementation was assessed:

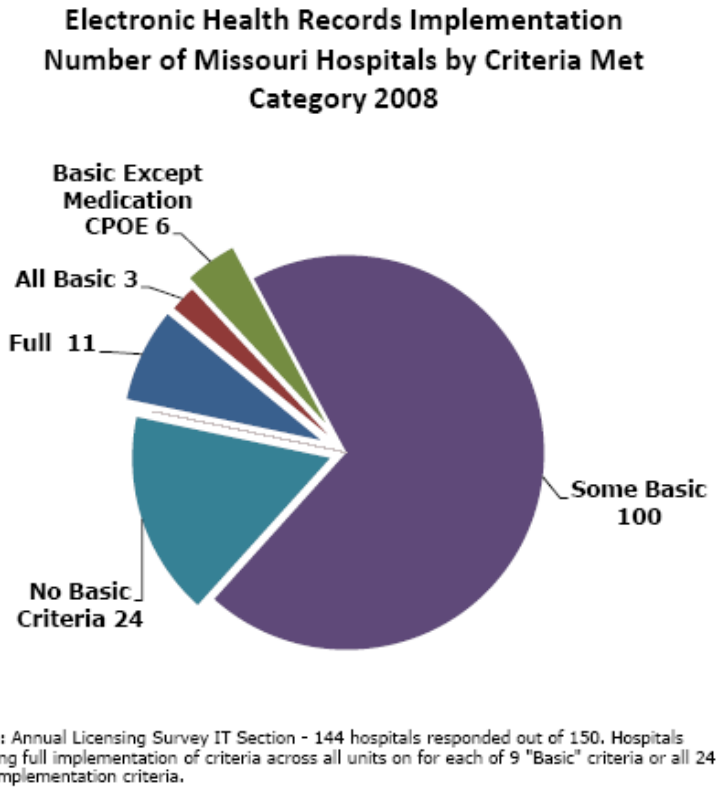


Figure 8: Electronic Health Record Implementation 2008

- *No EHR*: Reported implementation for 0 of the 24 identified ONC categories;
- *Partially Implemented*: Identified adoption for 1-23 of the identified categories;
- *Basic Implementation*: Identified implementation of the nine select & specific categories as defined by OHITA (these nine categories are a subset of the 24 identified for full implementation); and
- *Fully Implemented*: Identified implementation of 24 ONC-defined criteria required for full implementation.

2.4.3 Rural Health Clinics

There are 340 rural health clinics in Missouri. The majority of rural health clinics are small- and medium-size practices; over 1,500 total mid-level providers currently practice in rural health

clinics. According to the Missouri Rural Health Association, fewer than 10 percent of rural health clinics have implemented and/or use EHRs.

2.4.4 Federally Qualified Health Centers (FQHCs)

Recent efforts by Missouri's FQHCs and their primary care association have resulted in widespread adoption of EHR technology. There are 23 FQHCs in Missouri with nearly 180 total sites (including two "look-alikes"); these sites represent 300 prescribing professionals. All but one FQHC has adopted an EHR; the one remaining site is anticipated to implement an EHR by the end of 2010. There are approximately eight unique EHR systems among the FQHCs.

In June 2010, two Health Resources Services Administration (HRSA) grants were awarded in Missouri to further support health centers' adoption and implementation of EHRs and health IT. The Missouri Coalition for Primary Health Care (MCPHC), led by the Missouri Primary Care Association (MPCA), was awarded $1 million to support the expansion of its data warehouse. The St. Louis Integrated Health Network (IHN), a HRSA-funded Health Center Controlled Network of five St. Louis-based FQHCs, was also awarded $1 million.

The MPCA, with the support of state funding, has historically supported its members' acquisition of CCHIT-certified EHRs, hence the close to 100 percent EHR adoption among Missouri's FQHCs. Grant funding has also enabled the MPCA to build a data warehouse with interfaces to the individual FQHCs, intended to collect data and facilitate reporting needs (e.g., quality reporting, population health) among its members. The grant will continue to fund the development of MPCA's data warehouse so that the reporting capabilities, and subsequently patient care initiatives, may be realized.

The St. Louis Integrated Health Network plans to use the funding to support its Network Master Patient Index project. The goal of this initiative is to improve patient care by enabling the secure exchange of electronic patient health information across community health centers and hospital emergency departments in the region.

2.5 Electronic Prescribing

Medicaid providers have access to e-prescribing and refill request capabilities through a Surescripts certified feature of CyberAccess. Formulary information and class one alerts are currently available in CyberAccess.

The rate of e-prescribing adoption and utilization among providers and pharmacies in the state has grown steadily in recent years. In 2009, 5.5 million prescriptions were transmitted electronically, compared to 1.4 million in 2008.[2] As Figure reflects, of eligible prescriptions (excluding controlled substances), 16 percent were routed electronically in 2009, compared to only four percent in 2008. The number of Missouri physicians routing prescriptions electronically also increased significantly, with 3,119 physicians (35 percent) routing e-prescriptions in 2009, representing a near six-fold growth since 2007. Adoption has also grown among community

[2] Surescripts. State Progress Report on E-Prescribing: Missouri. Data as of December 31, 2009. Available at http://www.surescripts.com/about-e-prescribing/progress-reports/state.aspx?state=mo. Accessed on September 6, 2010.

pharmacies: 89 percent of pharmacies were reported to be capable of receiving electronic prescriptions in 2009 (versus 71 percent in 2008).

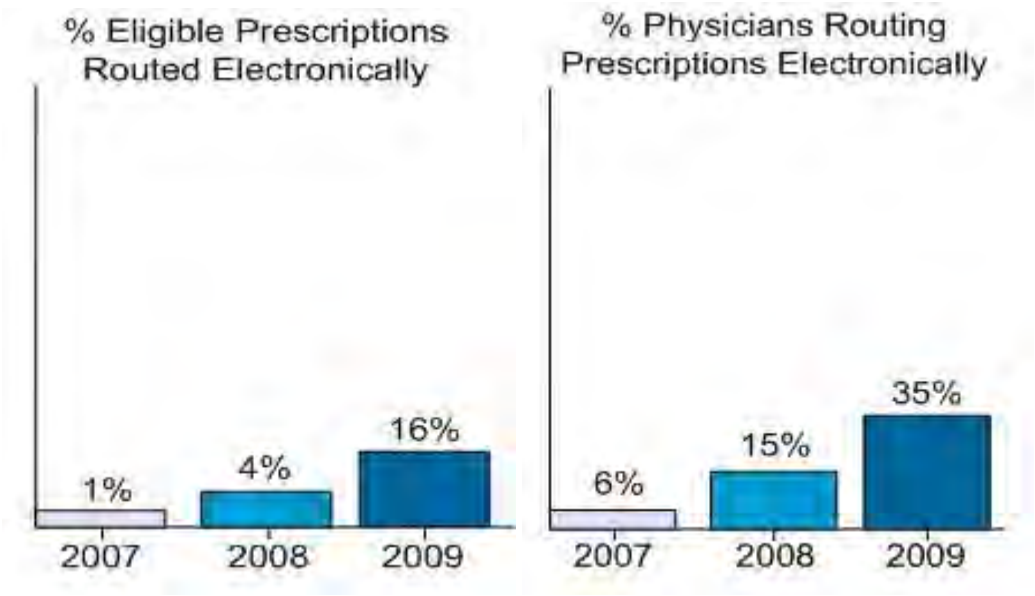


Figure 9: Electronic Prescribing in Missouri (2007 – 2009)

2.6 Broadband Access

Concerted efforts are underway in Missouri to improve access to broadband statewide. MoBroadbandNow, a private-public partnership, was launched in the summer of 2009 to aggressively compete for federal stimulus funds to expand broadband accessibility. When the initiative was launched, it was estimated that 79.7 percent of the population had access to broadband across the state; Governor Nixon's goal is to improve accessibility to 95 percent of the total population by the end of 2014. Figure 10 illustrates access to broadband across the state as of June 2010.

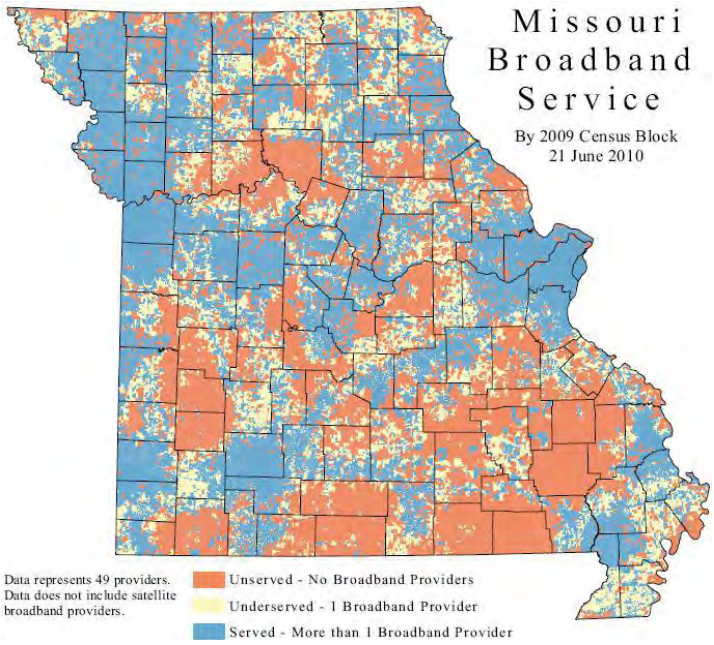


Figure 10: Missouri Broadband Coverage – June 2010

MoBroadbandNow is operating under a comprehensive vision for broadband and has aggressively pursued funding opportunities under the National Telecommunications and Information Administration (NTIA) and the USDA Rural Utilities Service (RUS). On July 2, 2010, it was announced that a number of Missouri entities had been awarded RUS grants. Funded projects within the state include:

- Grand River Mutual Telephone Corporation (Powersville, Missouri): This $20.3 million grant/loan project will provide broadband service to the towns of Corydon, Millerton, Allerton, and Lineville, Iowa; and Powersville, Missouri, and their surrounding rural areas. The project will affect approximately 5,200 people.
- Grand River Mutual Telephone Corporation (Lathrop, Missouri): Approximately 3,200 people, 47 businesses and 12 community institutions stand to benefit from the $11 million Grand River Mutual Fiber-to-the-Home Broadband Deployment Project in Lathrop, Missouri, and its surrounding areas via a fiber-to-the-home network.
- Northeast Missouri Rural Telephone Company (Green City, Missouri): Northeast Missouri Rural Telephone Company will receive $7.2 million to construct a FTTP network enabling greater than 20 Mbps broadband access. This network stands to benefit over 2,500 people near Green City, Missouri.
- University Corporation for Advanced Internet Development – MOREnet: This $62.5 million grant (with an additional $34.3 million applicant-provided match) will interconnect more than 30 existing research and educational networks, creating a nationwide high-capacity network that will enable advanced networking features for more than 100,000 essential community anchor institutions

Through the Missouri BroadbandNow initiative, Missouri has worked aggressively to bring broadband grants and loans to the state. Missouri was very successful in its efforts bringing in $261 million in federal funding for 19 projects. These projects are anticipated to be substantially completed making broadband available to users within two years.[3]

Figure 11 depicts the improved broadband coverage realized as of December 2011 and reported by MoBroadbandNow. Maps are based on information provided by over 100 participating internet service providers (ISPs) under non-disclosure agreements. Any variation in maps between and among publishing cycles is a result of the data MoBroadbandNow receives.[4]

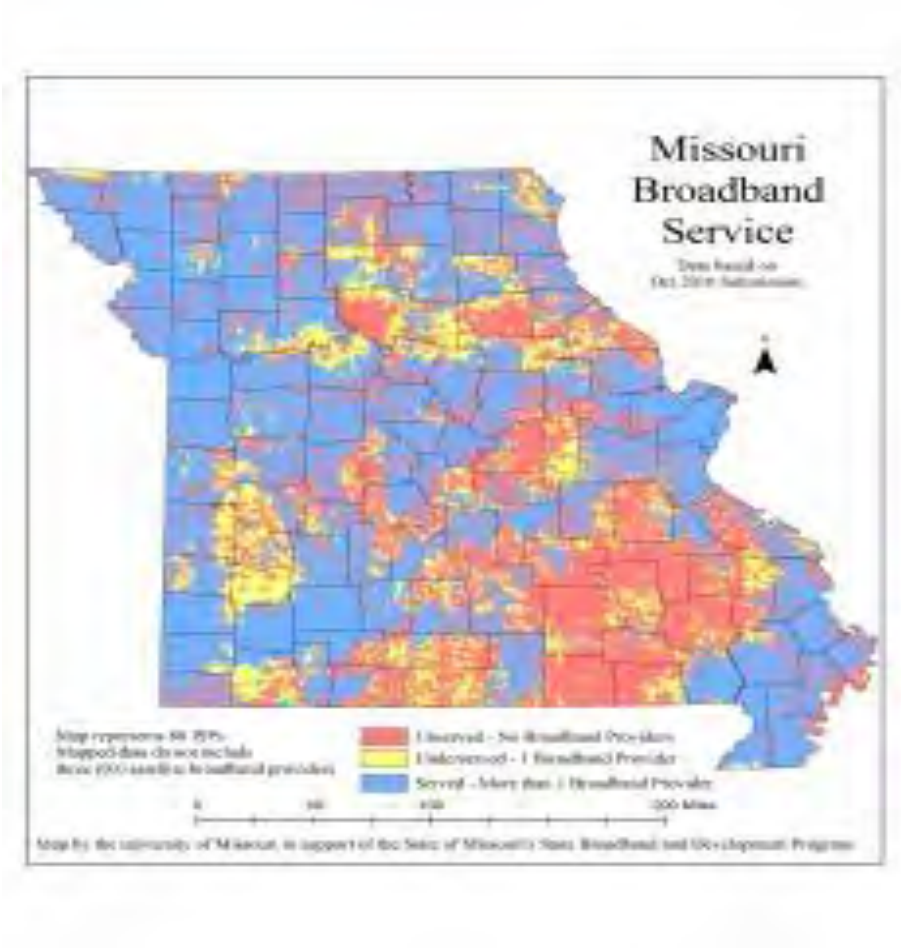


Figure 11: Missouri Broadband Coverage – December 2011

[3] http://mobroadbandnow.com/mo-broadband-initiatives/mobroadbandnow-overview-test/
[4] http://mobroadbandnow.com/maps-and-data/maps-and-data-overview/

2.7 Veterans Administration & Indian Health

Within Missouri, the Veterans Administration (VA) has a number of facilities. There are two Medical Centers in St. Louis; other Medical Centers are located in Columbia, Kansas City, and Poplar Bluff. In addition, there is one outpatient clinic in Branson, along with 19 community-based outpatient clinics spread throughout the state. These centers are part of the VA Heartland Network, which is also operational in Kansas and parts of Illinois, Indiana, Kentucky and Arkansas.

Health information across locations is shared via the Veterans Health Information Systems and Technology Architecture, also known as VistA. In addition to connecting sites within Missouri, the enterprise-wide system allows providers to share clinical information across VA facilities worldwide.

There are no Indian Health Service facilities, federally recognized tribes, or tribal (non-IHS) health clinics in Missouri.

2.8 Health Information Exchange

Missouri has designated the Missouri Health Connections (MHC) as the state HIE that will support improved patient outcomes, system efficiency, robust data exchange, and accountability. Integration of MO HealthNet into this statewide infrastructure is essential to the success of future efforts and presents an opportunity to dramatically enhance MO HealthNet's current investments in health IT for improved care and efficiency. The MHC is the technological infrastructure to connect public and private health care providers together with bi-directional and uni-directional service offering through its health information network, so that no health care provider is left behind in health information exchange. Representatives from MO HealthNet, the local HIE initiatives (described below), and the Missouri HIT Assistance Center have been active participants in the development of the strategy and governance of MHC's efforts.

2.8.1 Missouri Office of Health Information Technology (MO-HITECH)

Prior to the establishment of the Missouri Health Information Organization (HIO), now Missouri Health Connection (MHC), Governor Jay Nixon created MO-HITECH in 2009 to oversee a statewide, public-private planning initiative under the State HIE Cooperative Agreement Program. The State's Health IT Coordinator and DSS Director, Ronald J. Levy and subsequently Brian Kinkade, championed the effort along with colleagues and staff at DSS. Governor Nixon also appointed an Advisory Board to oversee MO-HITECH's six workgroups and provide recommendations to the Governor's office. Figure depicts the relationship among the State, MO-HITECH, the MO-HITECH Advisory Board, workgroups, and state project team during the HIE strategic and operational planning process.

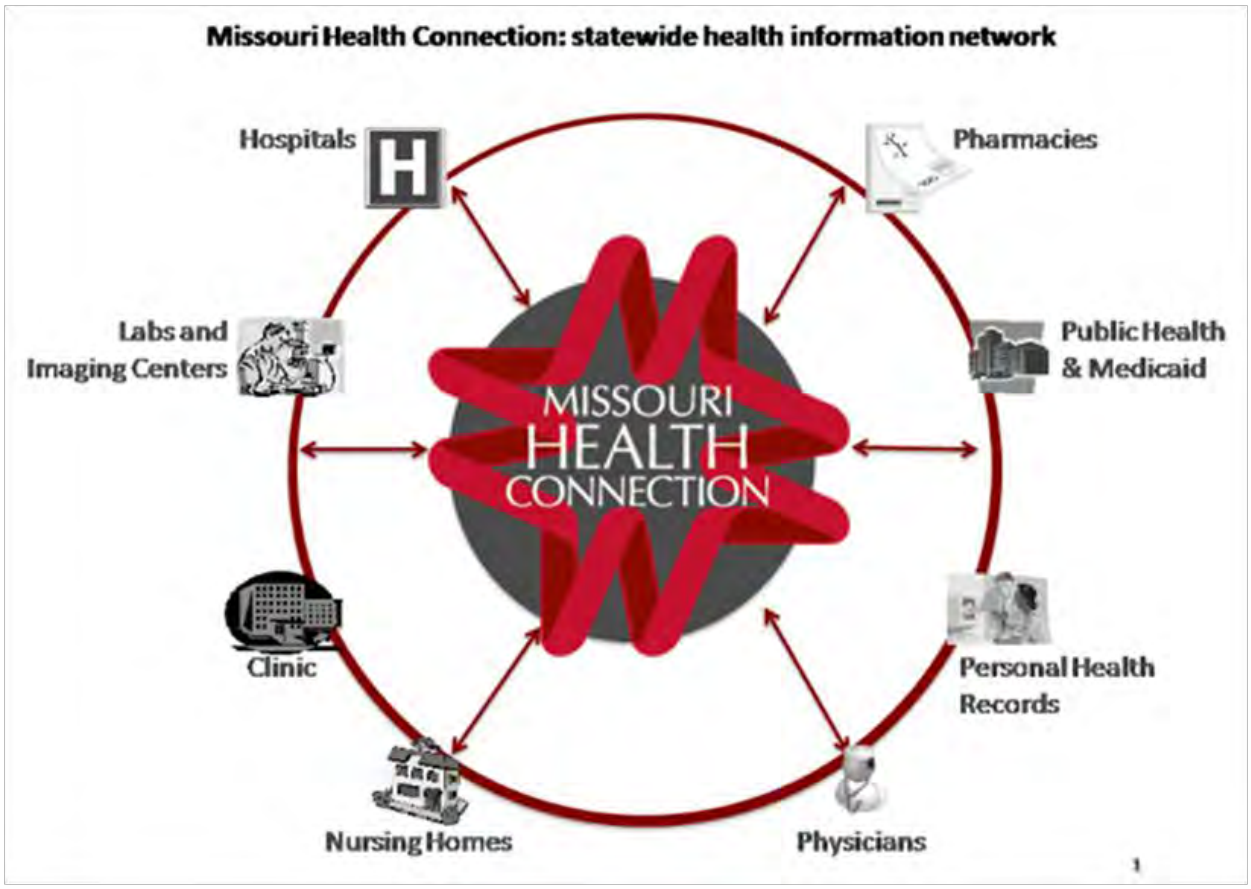


Figure 12: Missouri Health Connection's Health Information Network

MO-HITECH was created to facilitate input into the development of the state's HIE Strategic and Operational Plans for submission to the ONC. In an effort to inform these plans, the initiative convened six workgroups (displayed in Figure) to address the five domains outlined in the Funding Opportunity Announcement and an additional workgroup to address consumer engagement.

The workgroups met twice a month between December 2009 and June 2010 and participated directly in the drafting and revising of the State's HIE Strategic and Operational Plans. The MO-HITECH Advisory Board met monthly to review and discuss the workgroups' recommendations and ultimately to make recommendations to the Governor's Office. Initially Director Levy served as co-chair for the Advisory Board along with Barrett Toan, former CEO of ExpressScripts. Ian McCaslin, MD, Director of MO HealthNet, also served on the Board along with Margaret Donnelly, Director of DHSS, providing a strong state perspective and representation on the Advisory Board. Dr. Joseph Parks, current MO HealthNet Director, and Gail Vasterling, current DHSS Director, serve on the board.

In addition to ongoing opportunities for public comment and input via MO-HITECH Workgroup and Advisory Board meetings, the State kept stakeholders abreast of developments in a consistent and transparent manner through a public website and email listserv. Over 200 unique stakeholders participated in-person in the MO-HITECH initiative via these two channels, including representation from health plans, provider organizations, HIEs, universities, foundations, technology vendors, consumers and patient advocates. The feedback loop between stakeholders, Workgroups, the Advisory Board, and MO-HITECH is depicted in Figure .

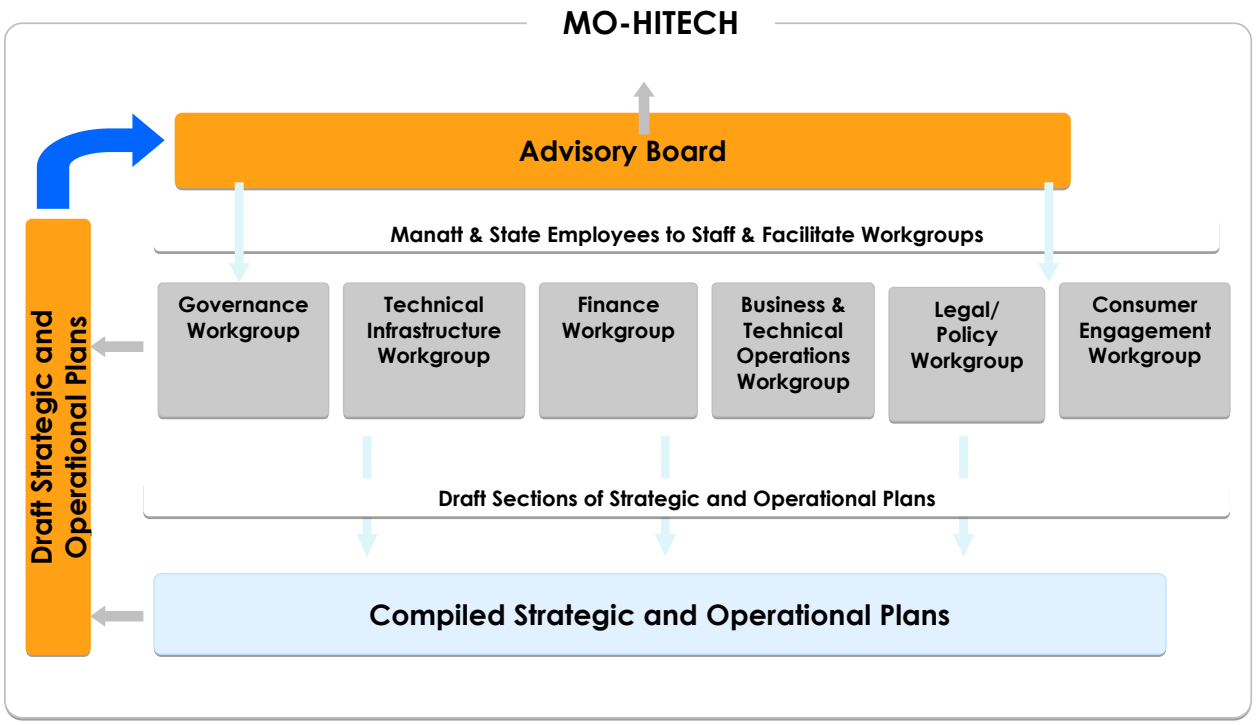


Figure 13: MO HITECH Workgroups & Advisory Board

The MO-HITECH HIE Strategic and Operational Plans included the following major recommendations relative to governance and the State's participation:

- Statewide HIE is governed by a collaborative multi-stakeholder organization; an independent, not-for-profit organization (501c3)—the Missouri Health Connections — was created and **is** being overseen by a diverse Board of Directors.
- The State will participate in the Missouri HIE as it has a non-delegable role as the steward of State assets and the protector of the public interest.
- The Missouri HIE will define and adopt business, technical, and operational policies that participants will comply with as members of the Missouri HIE.
- The Missouri HIE will coordinate with the Missouri's Regional Extension Center

Following the submission of the MO-HITECH HIE Strategic and Operational Plans, the MHC was incorporated to implement the plans' recommendations and fulfill requirements under the federal Statewide HIE Cooperative Agreement Program. In 2011, the MHC Board created the Missouri Health Connection (MHC) as a non-profit 501(c) (3) organization dedicated to connecting Missouri's patients and providers through a secure health information network and administering that network. The goals of the MHC are to:

- Improve the quality of medical decision-making and the coordination of care.
- Provide accountability in safeguarding the privacy and security of medical information.
- Reduce preventable medical errors and avoid duplication of treatment.
- Improve the public health.
- Enhance the affordability and value of health care; and,
- Empower Missourians to take a more active role in their own health care.

The MHC Board was transformed into the MHC public-private board of directors, featuring private practice physicians, consumer advocacy groups, representative from state government, legal experts and private health care organizations. More than 80 individuals from throughout the state have been involved in the planning process since 2009.

DSS is represented on the Board of Directors by Acting Director Brian Kinkade, the State's Health IT Coordinator, and Dr. Joseph Parks, the Director of MO HealthNet. The two Board seats were ex-officio in nature and are secured in the MHC bylaws. The State's Health IT Coordinator holds an ex-officio voting seat; the MO HealthNet Director holds an ex-officio, non-voting seat (bylaws may be accessed online at http://missourihealthconnect.org/resources/index).The Missouri Department of Health and Senior Services (DHSS) is represented on the Board of Directors by Gail Vasterling. The Board of Directors met bi-monthly to oversee MHC's planning activities.

In 2012, the MHC contracted with InterSystems to establish MHC's HIE services, provide the tools necessary to manage the HIE, and work with subscribers to connect. .The MO HealthNet Director of Information Systems, Darin Hackmann, participated on the InterSystems contract negotiations team to represent the interests of Missouri Medicaid and its providers and participants. A particular focus of Medicaid was ensuring the availability of low-cost EHR solutions for small Medicaid providers that can connect to MHC.

MHC worked with InterSystems to design a phased implementation approach for MHC HIE services. Initially, the first phase was to focus on the implementation of Direct Secure Messaging (Direct). Missouri Medicaid would be participating in MHC's first phase by utilizing Direct. DSS and MO HealthNet have worked with DMH, DHSS, and ITSD to identify potential Direct users within the State agencies and their Direct use cases. However, a rapidly changing landscape and delays with execution of the participation agreement resulted in a change in priorities.

Missouri elected to focus initially on implementation of the patient query function and establishment of a connection between the MHC and DHSS to support public health reporting. Missouri Medicaid is participating in MHC's patient query pilot project with the goal of sharing

Medicaid claims data through the MHC network and anticipates completing this connection in January 2014. Missouri Medicaid will later expand the connection with MHC to allow for bi-directional exchange of health information to support Medicaid business functions including case management and coordination of care and prior authorization and pre-certification of participant services. DHSS has established a test connection with the MHC to accept public health data submitted by providers through the statewide HIN. DHSS anticipates implementing the connection during 2014. After the MHC participation agreement is executed with DHSS and DMH, Missouri will move forward again with the deployment of Direct to support Missouri Medicaid.

MHC will connect and enable communication among unaffiliated providers and provider networks. Providers participating in MHC include hospitals, physician groups, clinics, labs, and the State of Missouri. MO HealthNet (Medicaid) is considered a vital partner in the statewide HIE planning efforts and has been closely involved in the design of the statewide HIE network.

2.8.2 Private HIE Initiatives

MHC focuses on engaging a variety of health care entities from around the state has more than 50 participating hospital, clinics, physician groups and behavioral health clinics. Collectively, these initial partners represent most areas of the state and care settings including rural and urban.

2.8.3 Regional Extension Center

The Missouri HIT Assistance Center (the AC) was notified that it would be awarded $8.7 million to serve as the state's REC in April 2010 under the federal Health Information Technology Regional Extension Center Cooperative Agreement Program**.** An additional two year extension was received in June 2012. The AC's goal is to assist 1,167 priority primary care providers to achieve meaningful use by September 30, 2013. The AC is housed in the University of Missouri's Department of Health Management and Informatics and the Center for Health Policy. The University has partnered with a number of organizations to serve as service providers under its grant, including:

- The Missouri Telehealth Network
- Primaris (Missouri's Medicare Quality Improvement Organization)
- The Missouri Primary Care Association (MPCA)
- EHR Pathway
- The Hospital Industry Data Institute (a subsidiary of the Missouri Hospital Association)

The AC and its partner organizations have been active participants in the MO-HITECH initiative; leadership from several organizations served as MO-HITECH Advisory Board members and workgroup co-chairs, and participated actively in workgroup meetings. The AC has an ex-officio, non-voting seat on the MiHC board.

The AC's strategy to satisfy ONC provider adoption targets is to leverage its partners' existing relationships with providers. For example, Primaris has relationships with providers who participated in the CMS Doctor's Office Quality - Information Technology (DOQ-IT) initiative,

while the MPCA has relationships with FQHCs as a result of supporting their EHR adoption efforts.

MO HealthNet recognizes the critical role that the AC plays in promoting EHR adoption and meaningful use among small and solo primary care practice physicians, many of whom are Medicaid providers and may be located in rural areas. MO HealthNet is committed to working with the AC to identify opportunities for collaboration, provider education, and technical assistance, among others. As such, the AC has collaborated with MO HealthNet in its planning and communications efforts related to implementing the Medicaid EHR Incentive Program.

In September 2010, the AC was awarded $990,000 from ONC to support EHR adoption among critical access and rural hospitals within Missouri. The AC partnered with the Hospital Industry Data Institute (a subsidiary of the Missouri Hospital Association) to serve 55 critical access and rural hospitals around the state.

On November 1, 2010, the AC announced 10 EHR companies as potential vendors for negotiated group purchasing arrangements. The 10 EHR vendors include: Group 1 Cerner, eClinicalWorks, E-MDs, Greenway, McKesson,-Pulse, SuccessEHS, Group 2 NextGen, VITERA, and Group 3 Amazing Charts.

As of September 2012, the AC has enrolled 1,439 PPCPs in Milestone 1, oversubscribing by 272 its goal of 1,167. Of these, 1,006 have implemented EHRs, reaching Milestone 2. In addition, 276 have achieved meaningful use of their EHRs. The AC has also enrolled 54 of its targeted 56 hospitals; of which 19 have reached Milestone 2 and 15 have achieved Milestone 3.

Currently, the AC has recorded 348 barriers to Meaningful Use from 244 provider organizations (99 organizations have a single barrier listed, 62 have 2 barriers, 17 have 3 barriers, and 13 have 4 or more). Practice issues (financial restrictions, change in organizational leadership, provider turnover, lack of provider buy-in, and lack of corporate buy-in) are the most common barriers (170 organizations), followed by vendor issues (failed/delayed upgrades, failed reporting, and slow EHR certification). Other issues include difficulties with the attestation process and meeting meaningful use quality metrics or sample requirements.

To learn more about AC, please visit http://www.ehrhelp.missouri.edu/.

2.8.4 Stakeholder Involvement and Review

MO HealthNet planning activities with respect to the implementation and administration of the Medicaid EHR Incentive Program have been conducted in partnership with many stakeholder groups across the state. In particular, MO HealthNet has provided regular monthly updates at the MHC Board of Directors meetings; these meetings are open to the public and the Board represents a diverse group of health care leaders. In addition, MO HealthNet shared the draft SMHP with the MO-HITECH stakeholder list that includes over 500 interested stakeholders, as well as with the Center, the Missouri Hospital Association, the Missouri Primary Care Association, the Missouri Health Advocacy Alliance, and the MHC. MO HealthNet received a number of comments from stakeholders and incorporated revisions to address questions and feedback.

3 SECTION B: MISSOURI'S "TO BE" HIT LANDSCAPE

3.1 Overview

MO HealthNet has established the following five-year goals to help Missouri's providers and patients realize the benefits of health IT and health information exchange (HIE). These goals include:

- Share Medicaid claims data with any participants in the statewide Health Information Network allowing them to view and/or consume this data into their EHRs.
- Administer the Missouri Medicaid EHR Incentive Program to promote and encourage provider adoption of EHR technology and achieve meaningful use.
- Encourage and promote provider participation with MHC to ensure care coordination and use this means for achieving meaningful use.
- Ensure options are available to all Missouri Medicaid health care service providers for participation with MHC for sharing and viewing/consuming clinical data ("No Provider Left Behind"). There are two solutions planned through MHC: 1.) A portal for providers to query and view data from website, and 2.) MHC will form a qualified HIE to allow provider EHRs to view and consume data directly through the statewide HIN functionality.
- Participate with MHC in the design and development of a statewide Provider Registry and identify opportunities to leverage the registry to support the Missouri Medicaid Program.
- Engage in collaborative partnerships with organizations such as the MHC, Missouri HIT Assistance Center (the AC), Missouri Primary Care Association, Missouri State Medical Association, Missouri Hospital Association, and others to promote EHR adoption and utilization and provider participation with MHC.

In addition to these goals, MO HealthNet is working toward achieving its vision for an expanded and reengineered Medicaid Management Information System (MMIS). The MMIS will be a central component of efforts to support Medicaid providers in participating in the Medicaid EHR incentive program and ultimately achieving meaningful use. In addition, MO HealthNet is actively working with its sister agencies—the DHSS and DMH—to coordinate activities and evolve a governance structure capable of program administration and oversight consistent with overall goals and objectives.

A brief description of the five-year goals and objectives is outlined in Table 5 below. MO HealthNet will work with stakeholders to develop meaningful measures to quantitatively benchmark goals and establish progress as the program matures.

3.2 Five-Year Goals

MO HealthNet recognizes that provider adoption and utilization of EHRs is an initial step toward meaningful statewide HIE in Missouri. Providers must meaningfully use a certified EHR and participate in the statewide HIE to be eligible for incentive payments. As described in the "As-Is" Landscape (Section A), a complete picture of EHR adoption among all Missouri providers and

hospitals is not available. The MO HealthNet statewide provider survey provides a foundational component in the state's efforts to effectively target provider outreach, education and other activities to stimulate continued adoption efforts.

In addition to efforts driven by survey results, MO HealthNet will continue to engage in collaborative partnerships with organizations such as MHC, Missouri HIT Assistance Center (the Center), Missouri Primary Care Association, Missouri State Medical Association, Missouri Hospital Association, and others to promote EHR adoption and utilization. MO HealthNet has historically joined with these organizations and others to support programmatic objectives and goals. These organizations also offer a direct channel of communication to the state's provider population; MO HealthNet will leverage such channels to conduct increasingly effective outreach. These organizations, along with MO HealthNet, have been active supporters of statewide HIE planning activities and coordination with MO HealthNet has been a regular and important topic. MO HealthNet will offer continued feedback and input, and participate in planning efforts as the Center and other stakeholders design and implement plans for physician training and outreach.

MO HealthNet worked closely with MHC to ensure low-cost EHR solutions would be available to all Medicaid Providers. The Technical Services Partner (TSP) contract includes provisions requiring InterSystems to identify low-cost EHR solutions that are compatible with the statewide HIE, to facilitate communications between the provider and the EHR vendor, and to establish the connection between the provider's EHR and the statewide HIE. Integrating Personal Health Record (PHR) technology will be a key asset to engaging consumers and patients as active partners in their care. MO HealthNet is also monitoring Nationwide Health Information Network (NHIN) development and will ensure its efforts will be compatible with the NHIN to support nationwide HIE goals and objectives.

In 2011, Missouri Medicaid implemented a Healthcare Home demonstration program. The healthcare home pilot sites were required to have implemented an EHR solution and to capture key clinical measures to demonstrate the positive outcomes of the program. The measures data is submitted for compilation and will support statewide quality and outcomes reporting. The providers were also required to offer a PHR solution for the program participants and were given the option to utilize the PHR solution currently available through Missouri Medicaid's CyberAccess web portal.

Approximately 15 percent of Missouri's residents are currently Medicaid beneficiaries; Medicaid coverage is expected to increase under federal health care reform and this growth provides additional urgency for MO HealthNet efforts to support EHR adoption and participation in statewide HIE as crucial components to managing and improving the population's health.

Table 5: MO HealthNet 5 Year Goals and Objectives

5 Year Goals	Objectives	Status
Facilitate participation in statewide HIE: As a key strategic partner of the MHC, promote and facilitate the participation of Missouri health care service providers in the Health Information Network, the adoption of EHRs, and the achievement of meaningful use.	Share Medicaid claims data with any participating organization for viewing and consumption into EHRs by providers.	Anticipated implementation in January 2014
	Promote and administer the Missouri Medicaid EHR Incentive Program to encourage adoption of EHR technology by providers and the achievement of meaningful use including participation with MHC.	EHR Incentive Program has been implemented and is ongoing.
	Ensure options are available to all Missouri Medicaid health care service providers for participation with MHC for sharing and viewing/consuming clinical data ("No Provider Left Behind).	Options are available to Missouri Medicaid providers.
	Participate with MHC in the design and development of a statewide Provider Registry and identify opportunities to leverage the registry to support the Missouri Medicaid Program.	Ongoing development effort with MHC.
	Engage in collaborative partnerships with organizations such as the MHC, Missouri HIT Assistance Center (AC), Missouri Primary Care Association, Missouri State Medical Association, Missouri Hospital Associations, and others to promote EHR adoption and utilization and provider participation with MHC.	Partnerships have been established. Missouri Medicaid continues to pursue opportunities to promote EHR adoption.
Leverage MHC Products and Services: MO HealthNet will leverage the products and services offered by MHC through the statewide HIN to improve the efficiency and effectiveness of the Missouri Medicaid Program and maximize the value of the statewide HIN.	Participate in MHC's Phase 1 – Direct Secure Messaging and Phase 2 – Patient Query via the HealthShare Exchange Network pilots.	Implementation of Direct is pending finalized participation agreements. Phase 1 of the patient query project is anticipated for implementation in January 2014.
	Identify the current and future business requirements of the Missouri Medicaid Program and its key partners and align with the strategic plan for the MMIS/CMSP and the opportunities available through connection to MHC.	MO HealthNet anticipates completion of the MMIS strategic plan and MITA 3.0 5 year roadmap in March 2014.
	Promote and adopt use of the Direct Secure Messaging	Implementation of Direct is

5 Year Goals	Objectives	Status
	tool to facilitate communications with Medicaid partners and providers and support exchange of clinical data.	pending finalized participation agreements.
	Align the Medicaid Health Information Technology Plan with the HITECH goals and objectives, MITA, and the CMS Seven Conditions and Standards.	MO HealthNet anticipates completion of the MITA 3.0 SS-A, CMS Seven Conditions and Standards assessment, and MITA 3.0 5 year roadmap in March 2014.
	Participate with MHC in the development of the MHC products and services for Medicaid by leveraging the MHC framework, for product management which aids in the identification, submission, and consideration of value-add products.	Ongoing participation on the MHC Board of Directors and coordination with MHC.
Improve Patient Outcomes, Overall Member Wellness, and the Public Health: MO HealthNet is committed to improving both provider and patient access to health information while identifying opportunities for patent education, care coordination, and the management of chronic health conditions. MO HealthNet also has a demonstrated commitment to supporting providers as they offer high-quality and accessible care, as well as relying on the expertise and guidance of consumers as it develops policies and programs.	Establish processes to capture consent during the enrollment process for all Medicaid participants allowing Medicaid providers access to clinical data for their patients.	Modifications to the Medicaid enrollment application to capture consent have been implemented.
	Ensure opportunities for Medicaid partner access to clinical data to improve the effectiveness of case management and coordination of care programs and support the Missouri Healthcare Home Program.	MO HealthNet implementation of Phase 1 of the patient query function is anticipated in January 2014, which will allow MHC participants to access and consume Medicaid claims data.
	Work with key partners including the DHSS and the DMH to help those departments achieve their goals related to public health reporting and provision of behavioral services.	MO HealthNet is partnering with DMH and DHSS on several related initiatives including development of enterprise strategies for a technical architecture to support health information exchange and an EHR solution.
	Promote the use of Personal Health Records by Medicaid participants. and ensure Medicaid participants have options for easily accessing their personal health	MO HealthNet is offering a PHR solution allowing Medicaid participants access to their claims

5 Year Goals	Objectives	Status
	information to empower them to take an increasingly active role in their health care	information.
Support the Overall Success of the Statewide Health Information Network including Sustainability: MO HealthNet is committed to supporting the development of a statewide HIE. MO HealthNet staff have been active participants in the creation of a preliminary financial model and will continue to work with the MHC staff to support a model that MO HealthNet is confident in and in which it will participate.	Participate on the MHC Board and MHC workgroups to define and establish the statewide HIN.	MO HealthNet, DMH, and DHSS staff participate on the MHC Board and workgroups.
	Subscribe to MHC.	MO HealthNet has executed a participation agreement with MHC including subscription to the statewide HIN.
	Through provider communications and education, promote the value of the products and services offered by MHC through the statewide HIN to enable a provider in the delivery of quality and cost-efficient health care services	MO HealthNet and DHSS have moved forward with connections to the statewide HIN that offers value to the providers encouraging participation.
Ensure the privacy and security of patient protected health information (PHI): MO HealthNet will share administrative data in a standard agreed upon format when the data is used to promote care coordination for MO HealthNet members and/or transmitted to achieve EP or EH Meaningful Use requirements. Maintenance of the Health Insurance Portability and Accountability Act (HIPAA) and the ARRA security standards for receipt and transmission of the health information is a priority for MO HealthNet, MHC, and stakeholders participating in the statewide HIE.	Apply the HIPAA and ARRA security standards when sharing Medicaid claims data through the statewide HIN.	MO HealthNet and DHSS work closely with MHC to ensure secure connections to the statewide HIN and application of HIPAA privacy and security rules to sharing of data.
	Ensure Medicaid and MHC policies for patient consent management are aligned with applicable state and federal laws.	MO HealthNet and DHSS have conducted internal reviews of patient consent and allowable data uses through the statewide HIN.
	Ensure access to Medicaid claims data is logged and logs are available for review as required by HIPAA.	MO HealthNet and DHSS have worked with MHC to ensure necessary logging will occur.

3.3 Medicaid Technical Infrastructure & Environment

In 2006, MO HealthNet assessed the design of the MMIS and the best way to update and enhance its functionality. Consultants were engaged to review system elements and make recommendations. Activities included: a review of current functionality; a Medicaid Information Technology Architecture (MITA) State Self Assessment (SS-A); an analysis of the options; and recommendations.

Ultimately, the decision was made to reengineer the current system, based on an evaluation of risk and cost, as well as minimizing the disruption to providers.

Reengineering plans include the following components: a relational database management system; HIPAA II data exchange and code sets; centralized prior authorizations; correspondence imaging and automated workflow; browser-based end-user screens; a rules engine; increased claims history retention; audit trails; a multi-tier benefit package; enterprise service bus interface; online real-time transactions processing; web services technologies and standards for advanced applications; metadata management; EHRs; and other modules.

Ultimately, it is MO HealthNet's goal to develop a health IT architecture that also builds on federal meaningful use requirements by:

- Promoting best practices and use of medical evidence
- Promoting accrual of reporting positive health care outcomes and reporting patient outcomes
- Promoting exchange of actionable clinical data
- Promoting efficiencies in provision of services

Figure represents MO HealthNet's EHR roadmap, detailing the products and project timeline included in the EHR expansion. The migration path begins in year 2010 and moves progressively toward SOA technology implementation and is aligned with the MITA business maturity model.

Year	MITA 2.01 Roadmap					MITA
2012	Multi-Tier Benefit Packages		Broader SOA Services		National Exchanges	Level 5
2011	ICD 10 Clinical Data	5010 Formats	SOA Services	Unlimited Claim Size	Regional Exchanges	Level 4
2010	Provider Web Services	Participant Web Services		Rules Engine	Broader EHR Collaboration	Level 3
2009	Workflow & Imaging	Real-time Adjudication	Browser MMIS	DB2 Solutions	ACS/EHR Exchanges	Level 3
2008	Interoperability & Standards		Modernization Applications		Modernization Infrastructure	Level 2
2007	DDI Services		IV&V Services		Modernization Planning	Level 1
2006	MITA SSA	CMS APD	State RFP	DDI Award	IV&V Award	Level 1

Figure 14: MITA Roadmap

Since 2006, MO HealthNet has successfully completed several of the MMIS system enhancements including the first phases of the relational database and rules engine implementations. In October 2013, MO HealthNet implemented the second and final phase of the relational database project. MO HealthNet plans to start the second and final phase of the rules engine implementation in January 2014. MO HealthNet successfully completed implementation of the version 5010 and D.O. transaction sets, the CORE Operating Rules Phases I, II, and III, and the ICD-10 code sets. MO HealthNet plans to start the implementation of the CORE Operating Rules Phase IV in 2014 pending issuance by CMS of the final rule with a target implementation date of December 31, 2015.

MO HealthNet started its MITA 3.0 SS-A in January 2013. The assessment will include the creation of the MITA 5-year roadmap. The target completion date is March 31, 2014. MO HealthNet also started its MMIS procurement process and is considering several alternatives including MMIS replacement. The information gathered during the MITA assessment related to opportunities for improvement in business functions will play a key role in determining the MMIS procurement recommendation. Missouri Medicaid participation in the statewide HIN and support of providers achieving meaningful use are being factored into the MITA assessment and the recommended procurement strategy.

3.4 EHR Incentive Program Processing

MO HealthNet is committed to the efficient and timely administration of incentive payments and is one of 10 states using the State Level Registry (SLR), a product offered by Xerox Heritage, LLC (formerly Affiliated Computer Systems (ACS)). This secure portal allows exchange of data with the CMS R & A system; stores documentation submitted by providers and leverages the functionality within the existing MMIS to initiate provider payments.

The CMS R&A System is the primary point of entry into the Medicaid and Medicare EHR Incentive Programs. All eligible professionals (EPs) and eligible hospitals (EHs) seeking incentives must first enroll in the R&A System. MO HealthNet successfully completed testing with the R&A System and launched the Missouri EHR Incentive Program on April 4, 2011, began accepting attestations June 1, and made payments beginning in late July.

A total workflow of systems and manual processing of incentive payment requests is depicted in Figure 18 in Section 4.3.

3.5 Health Information Exchange

The MHC is leading the state's efforts to create, support, and sustain statewide HIE among Missouri's providers and patients. MO HealthNet is committed to working collaboratively with the MHC and its stakeholders—physicians, hospitals, consumers, laboratories, pharmacies, health plans, and others—to create a consensus-based HIO that will facilitate the secure exchange of health information. MHC has held focus groups with hospitals, hospital systems, and individual providers to gain an understanding of their expectations for MHC products, services, and pricing. MHC leveraged the results of these sessions to refine its product and service offerings and its ultimate pricing model. See Figure for the value proposition and Figure for the value proposition to consumers.

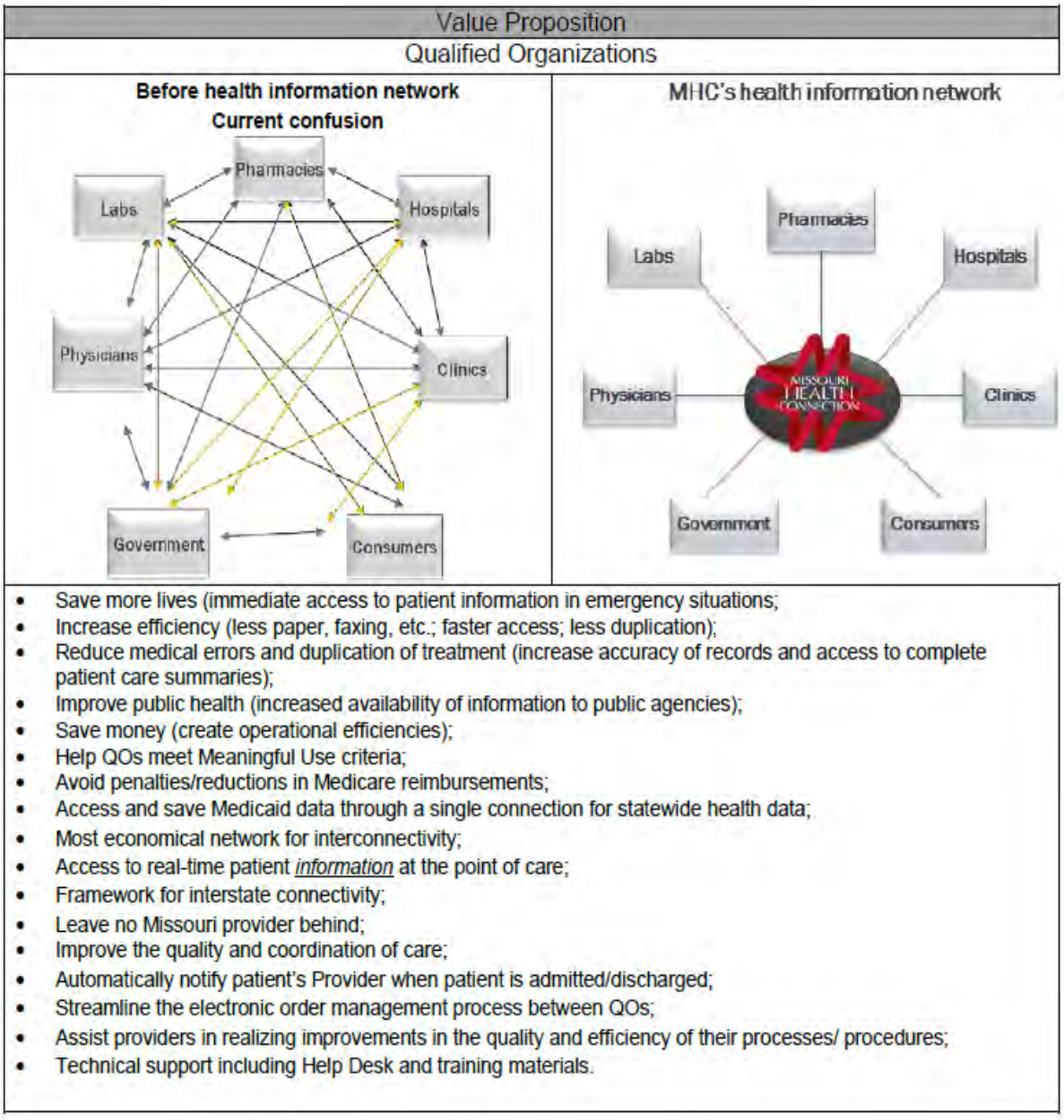
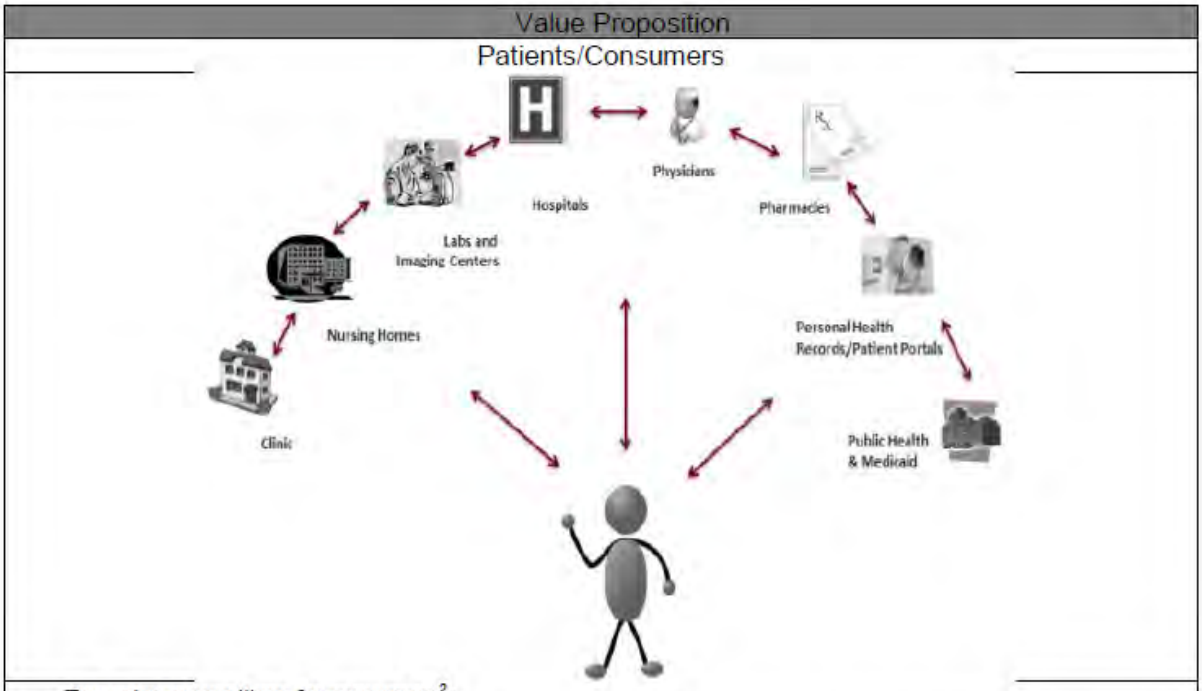


Figure 15: Value Proposition – Qualified Organizations



Top value propositions for consumers[2]*:*

- MHC's network could help save your life in an emergency by giving emergency room doctors instant access to all of your vital medical information, including medications, allergies, and family medical history, so even if you are unconscious they can begin to treat you immediately and effectively.
- MHC's network will help you to protect your children when you can't be there. Just like you, this network will know your child's medications, allergies, and family medical history. That way, if something happens to your child at school, with a babysitter or at a friend's house, doctors will have the critical information they need to help your child.
- MHC's network will help ensure you get the best possible care by allowing your doctors to coordinate and work together. Each of your doctors will be able to see all of the tests, examinations and procedures conducted by every other doctor on the network. They will be able to communicate with each other and align strategies to keep you healthy.
- By giving your doctors more information about you, MHC's network will help to reduce misdiagnosis and prevent dangerous medical errors. This means fewer trips to the doctor and a reduced risk of a serious emergency.
- MHC's network will put an end to the hassle of filling out the same information with every new doctor, running around town to pick up and drop off records and prescriptions, and waiting days for lab results to get in. Signing up for this network means less paperwork, less confusion, and less wasted time for everyone who signs up.
- MHC's network will save Missourians money and reduce the cost of health care by eliminating duplication of treatment and unnecessary testing, as well as the cost of printing, copying, shipping, and storing paper records.

Figure 16: Value Proposition – Consumers

MO HealthNet has been a particularly active partner with respect to the technical design of MHC's infrastructure and core services to ensure its compatibility with the MHC. MO HealthNet has developed an interface to MHC's network to send and receive information among its enrolled providers as well as unaffiliated non-Medicaid providers. MO HealthNet is currently working with the MHC to understand how a common provider registry may benefit both organizations, as well as other state agencies. Beyond active participation and presence on the

MHC Board, MO HealthNet is committed to participating in MHC's network to ensure its providers have access to information available through MHC's services. Ultimately, Medicaid beneficiaries will also be able to access their health information through a web portal/personal health record (PHR). MO HealthNet is subscribing to MHC, and, as such, will pay its fair share for participation.

4 SECTION C: MISSOURI'S EHR INCENTIVE PAYMENT PROGRAM ADMINISTRATION

4.1 Overview

MO HealthNet views the federal investment in EHR adoption as an opportunity to expand its existing vision and framework for the delivery of health care to all Missourians. MO HealthNet submitted its annual Implementation-Advanced Planning Document Update (I-APDU) for CMS review on April 9, 2013; formal approval of the IAPDU was received June 6, 2013. As with most states, resources for new programs are severely constrained and obtaining continued enhanced FFP is critical to MO HealthNet achieving its goals and objectives for this program.

In an effort to anticipate market demand for the Medicaid EHR Incentive Program, MO HealthNet initially reviewed provider claims information for all eligible MO HealthNet provider types to *estimate* the number of EPs and EHs. To arrive at the estimate below, MO HealthNet used the average of aggregated encounter data by provider type (e.g., physicians, nurse practitioners) over a 90-day period. A 90-day period was chosen to account for utilization variation in any one month. These data will be reflected in the I-APD and CMS-37.

Based on this methodology, MO HealthNet estimated approximately 1,099 providers and 90 hospitals are eligible for EHR incentives. The MO HealthNet provider survey (described in Section A) provided additional insight into the number of providers who intend to apply for Medicaid or Medicare EHR incentives.

Table 6: Missouri Eligible Providers and Hospitals (estimated)

Provider Type	Providers & Hospitals Total	Eligible Providers & Hospitals (Estimated)
Eligible Professionals (EPs)		
Physician MD	7543	598
Physician DO	510	125
Nurse Practitioners	880	73
Certified Nurse Midwife	9	5
Dentists	633	*
Managed Care EPs	*	298
Total	9575	1099
Eligible Hospitals		
Acute Care Hospitals	78	71
Children's Hospitals	4	4
Critical Access Hospitals	35	15
Total	117	90

*Projections for dentist and MCO EPs not enrolled directly with Medicaid eligibility are not available at this time. Most MO HealthNet dental and professional practitioner services are provided by managed care organizations (MCOs). As such, they are not supported by discrete encounter data. MO HealthNet is currently working with the MCOs to determine the best way to calculate and validate eligibility threshold data for dentists and eligible professional practitioners.

As of June 30, 2013 the State has disbursed $134,741,256 at 100% FFP, $49,863,859 for 2708 payments to 2143 Eligible Professionals (EPs) and $84,877,397 for 110 payments to 91 Eligible Hospitals (EHs). Approximately 26% of EPs and 21% of EHs returned for meaningful use payments in the first 24 months of the program. MO HealthNet originally estimated provider

incentive payments would be made to approximately 550 EPs and 60 hospitals during State Fiscal Year 2012; totaling $60,000,000. This included an estimated $50,000,000 to EHs and $10,000,000 to EPs. MO HealthNet received supplemental funding for Incentive Payments to cover the greater than projected program participation.

4.1.1 EHR Incentive Program Management Structure and Leadership Team

This section includes a high-level description and summary of how MO HealthNet has organized its staff to carry out day-to-day operations for the EHR Incentive Program. Below is an organization chart showing the different areas within MO HealthNet that are responsible for implementing and administering the program as well as the Contractors participating in program administration.

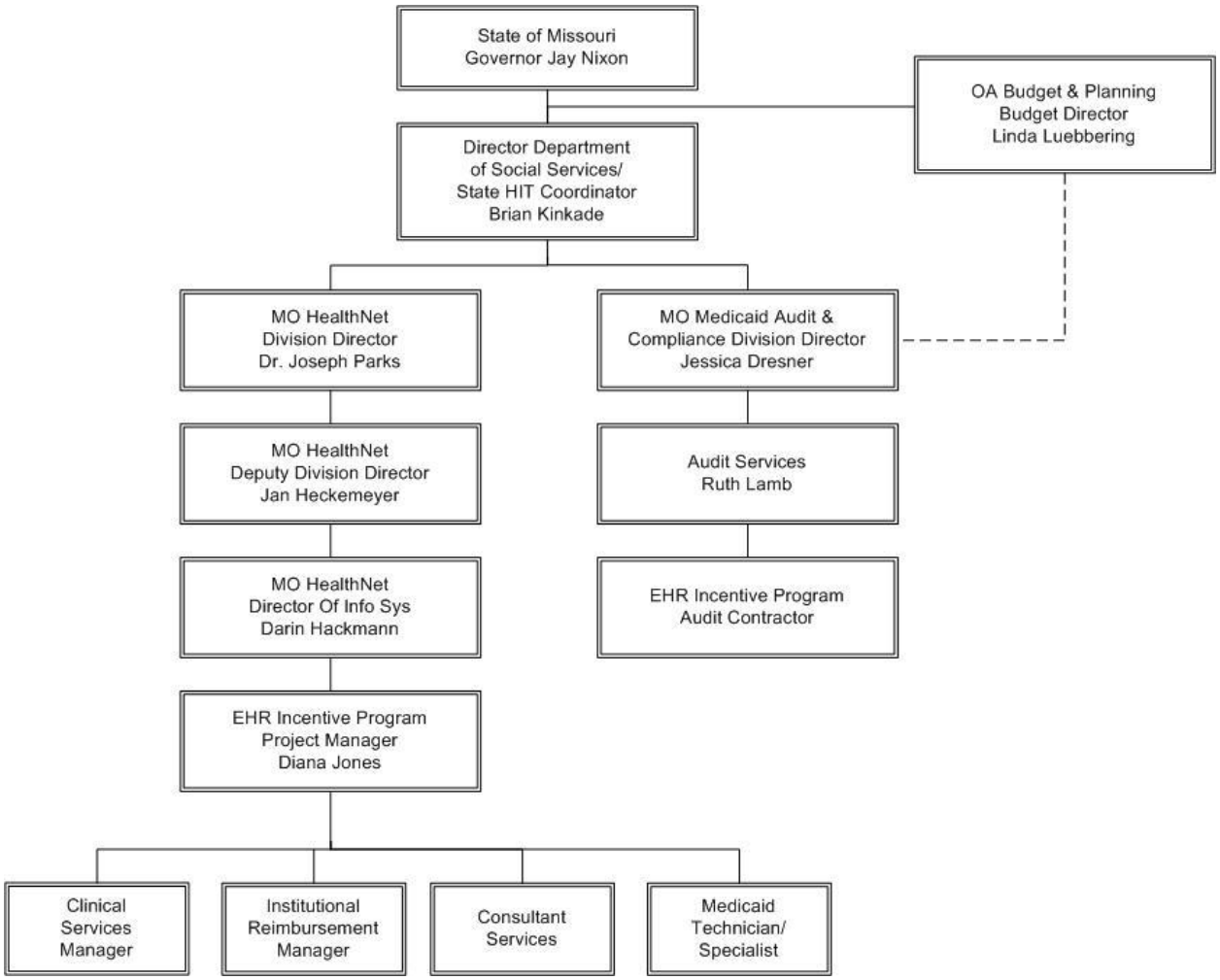


Figure 17: Medicaid EHR Incentive Program Organization Chart

MO HealthNet is utilizing a combination of internal resources and contracted staff to ensure the successful administration and program oversight. The range of implementation activities for the

Medicaid EHR Incentive Program were led by staff from MO HealthNet; interface development activities were led by the ITSD in the Missouri Office of Administration; and the State Level Registry was purchased from Xerox Heritage and implemented under the direction of MO HealthNet. Project staff have been important to the program planning and implementation efforts to date and will continue to provide expert guidance during ongoing operations.

The Medicaid EHR Incentive Program is a central component of DSS and MO HealthNet efforts to advance health IT within Missouri. As with other programs and initiatives, MO HealthNet has identified a leadership and governance structure that will facilitate program administration while ensuring oversight, accountability, and transparency. This approach reflects MO HealthNet's efforts to:

- Remove barriers and create enablers for health IT adoption and widespread achievement of meaningful use
- Collaborate with stakeholders and other partners to contribute to the development and promotion of the Medicaid EHR Incentive Program in Missouri
- Leverage existing infrastructure and processes to enable efficient program operations , and
- Coordinate, as appropriate, with other Missouri departments and divisions

The Director of the Missouri Department of Social Services and Missouri State HIT Coordinator Brian Kinkade has overall responsibility for the project. The implementation and operation of the program is managed by the MO HealthNet Director of Information Systems Darin Hackmann and the MO HealthNet Project Manager Diana Jones. Darin Hackmann is responsible for developing the Missouri Medicaid strategic plan for and coordinating all Missouri Medicaid efforts related to HITECH initiatives including the Medicaid EHR Incentive Program and works closely with MHC's statewide network. Diana Jones is responsible for managing the Missouri Medicaid EHR Incentive Program in a full-time capacity.

Missouri plans to administer the program within the organization, leveraging existing MO HealthNet support units where possible. As the EHR Incentive Program activities have matured, MO HealthNet has identified additional resources that are necessary to fully support the program, including temporary staff to work a backlog of provider incentive payment requests and plans for an Audit Contractor to complete Postpayment review activities. An explanation of these staff changes is available in the HIT IAPDU.

4.2 Outreach and Provider Support

Missouri has established a variety of methods to increase awareness, provide education, and respond to questions regarding the Medicare and Medicaid EHR Incentive programs. The SLR offers a help desk service to assist providers in using the system. In addition, MO HealthNet contracts with Xerox Heritage to provide additional resources with expertise in Missouri's Medicaid and Medicaid EHR incentive programs. MO HealthNet operates a provider call center through the Medicaid Management Information System (MMIS) vendor (WiPro Infocrossing). Staff have been provided general information about the incentive programs and refer calls to the program help desk as needed.

While call center staff handle a significant volume of questions, MO HealthNet staff are responsible for handling complex inquiries. In addition to call centers, Missouri relies on a number of different channels to disseminate information and engage with the provider community. Program bulletins are sent as needed and program information is posted to the MO HealthNet web page for the EHR incentive program. MO HealthNet partners with external stakeholders to speak at their respective events (e.g., the Missouri Primary Care Association, Missouri Hospital Association, Missouri State Medical Association). These efforts are in addition to webinars and teleconferences that are directly offered to providers. Other educational partners include the Missouri Rural Health Clinic Association, the Missouri Association of Osteopathic Physicians & Surgeons, the Missouri HIT Assistance Center, etc. MO HealthNet anticipates continuing and improved use of these communication outlets to communicate with Medicaid providers about the EHR Incentive Program

As part of the planning process for the Medicaid EHR Incentive Program, MO HealthNet has engaged in a series of meetings and briefings with both internal and external partners. Such meetings have included representatives from the Missouri Primary Care Association, the Missouri HIT Assistance Center, the Missouri Hospital Association, managed care organization plan representatives and others. These meetings have focused on providing information about MO HealthNet plans for program launch and administration, as well as seeking feedback on a number of issues, including the development of the provider survey, data validation sources, coordination of communication efforts, and other program components. Information sharing efforts also include providing program updates at MHC board meetings,

MO HealthNet actively solicited stakeholder review of and comment on the draft SMHP as well as making a review copy available on the website. MO HealthNet addressed all stakeholder comments and concerns. MO HealthNet will continue to work with its partners to disseminate information about the incentive program and encourage participation among eligible providers.

MO HealthNet engages in ongoing efforts to coordinate activities with the HIT Assistance Center as appropriate. Such efforts include joint participation in speaking engagements, sharing communication materials, participation in monthly planning calls, consulting on EHR incentive programmatic questions, etc.

Finally, MO HealthNet has sent emails to its distribution list of MO HealthNet providers announcing the EHR Incentive Program and available resources; MO HealthNet plans to continue such blasts as programmatic milestones are met (e.g., program launch). Table 7 identifies major communications planning milestones met during initial program implementation.

Table 7: MO HealthNet Communications Planning Activities

Communication Activity	Month/Year
Launch MO HealthNet EHR Incentive Program website	July 2010
Release draft SMHP for stakeholder review	October 2010
Email blast with provider survey results and program update	November 2010
Open meeting to present provider survey results	November 2010
EHR Incentive Program outreach to partners	Ongoing
Develop joint communications pieces with partners	Ongoing
Interface with R&A System approved	April 2011
Provider Bulletin: Pre-Launch	April 1, 2011
EHR Incentive Program webinars for providers, stakeholders, RECs	Multiple sessions per year
Email Blast: Accepting attestations via portal	June 2011
Began issuing provider incentive payments	July 2011
Last day for EHs to submit attestations for program year 1	December 31, 2011
Last day for EPs to submit attestations for program year 1	March 31, 2012
Begin collection of Meaningful Use Attestations	April 2012

MO HealthNet maintains a Medicaid EHR Incentive Program website (http://www.dss.mo.gov/mhd/ehr) that includes a fact sheet, frequently asked questions, resources, and other materials. Materials and tools have been available via the website since in July 2010 and are updated regularly. The SLR outreach page links to available CMS tools (e.g., provider eligibility tool) and also contains worksheets to advise providers on what information is needed prior to beginning submission in the SLR. To facilitate interactive electronic communication, MO HealthNet has established a dedicated electronic mailbox to accept specific provider inquiries.

4.3 EHR Incentive Program Processing of Incentive Payments

Although MO HealthNet had initially planned to develop its own system for processing incentive payments, several vendor solutions were available to the State. After investigation, MO HealthNet determined the most economical and efficient solution would be to amend its contract with Xerox Heritage, LLC and to use their SLR and Medicaid Incentive Provider Portal. The providers use the portal to submit attestation documentation for the EHR program. The SLR is automated to the extent possible to support the state's eligibility verification, payment calculation, and auditing processes.

The SLR supports a number of prepayment validations for both EPs and EHs. Manual prepayment validation takes place where an automated solution is not practical.

EHR Incentive Program processing activities are grouped into the following four steps:

1. Provider registration and eligibility – This step requires the provider to register for the program at the central federal registration site and the state site, and system validations support the registration.
2. Provider attestations – This is a series of statements affirmed by the provider, further establishing eligibility in the program and includes system and manual validations that support the attestation.

3. Pre-payment verification– This is the final data validation conducted prior to issuing an incentive payment. It is important to note that in some cases weeks or months can pass between initial registration, submission of the completed attestation and validation payment.
4. Postpayment audit – This step includes both desk audit and field audit activities for ensuring providers meet all program requirements and appropriate payment was made. The audit strategy and procedures are described in Section 5 of this SMHPU and in Missouri's detailed Audit Plan (See Appendix submitted separately to CMS.)

To streamline program administration, MO HealthNet has established a workflow for processing EPs and EHs requests for program participation and incentive payment as shown in the figure below.

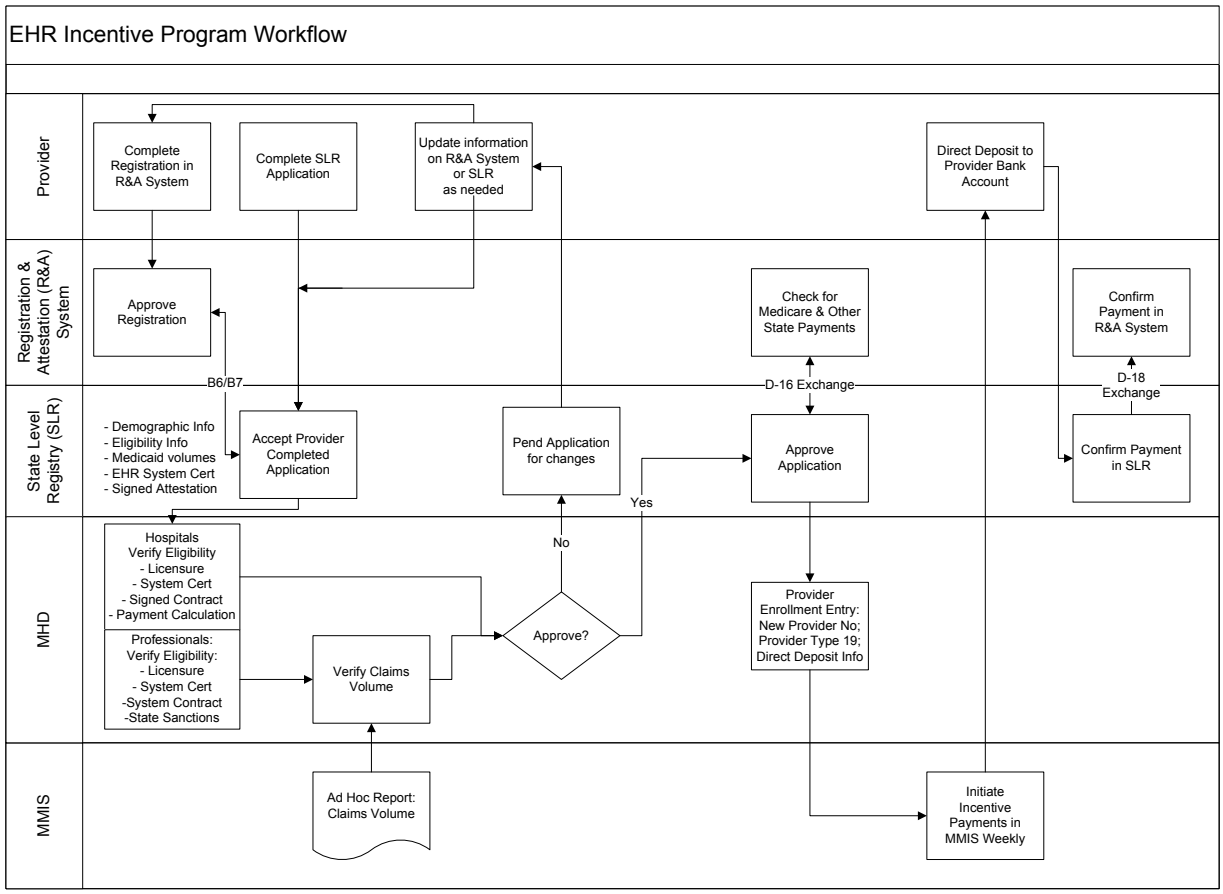


Figure 18: EHR Incentive Program Process Workflow

4.3.1 Provider Registration and Eligibility

Both MO HealthNet and potential participants must undertake a series of activities as part of the Registration and Eligibility process. The activities are sequenced as follows:

- EP or EH must register in the CMS Registration and Attestation (R&A) system to indicate interest in participating in the Missouri Medicaid EHR Incentive Program.
- The SLR receives a daily batch file transfer from the R&A system
- The EP or EH must also access the web based tool (SLR) to enter additional information (Provider Name, Address, TIN, NPI, CCN) to complete the registration with the State. If all required information matches data entered in the R&A System, a provider profile is created in SLR and provider may begin submitting attestation documentation.
- Information checked during the eligibility review includes accessing the master provider file to determine applicant status as an active Medicaid Provider. Workbooks and users manuals include additional guidance for providers (i.e., information requested, how to calculate eligibility) in order to facilitate registration.
    - Additional registration information required by MO HealthNet
    - Demographics about the practice, including patient volume
    - Information on certified EHR system used
    - Formal attestation summary signed, with payee assignment
    - All information about AIU in provider year 1 and MU Stage 1 in year 2.
- Volume information will then be verified using claims data.
    - EP volume is compared to claims and encounter data in the MMIS by running an ad hoc report for each provider that applies for the incentive payment.
    - EH volume requirements can be verified through data that reside in the MMIS, the Managed Care Encounter data, and hospital costs reports.
- Other pre-payment checks include ensuring the EP is licensed by appropriate board, not on state sanctions or investigation list, and confirms payee information.
- EH registration also includes ensuring that the EH has an active license and a CCN in the appropriate range.
- MO HealthNet will utilize information available through the Board of Healing Arts licensure database, Division of Professional Registration, and Office of the Inspector General (OIG) database,
- Verify accurate EHR certification number entered with ONC Certified Health IT Product List (CHPL) website.

Patient Volume Determination

Determining patient volume is a critical component of establishing eligibility for incentive payment Medicaid encounters that comprise patient volume are defined consistent with the final

rule and include encounters for which Medicaid paid in whole or in part, such as those within Medicaid fee-for-service and Medicaid waivers (e.g., Medicaid managed care organizations, Medicaid 1115 waiver programs, Programs of All-Inclusive Care for the Elderly, etc.). MO HealthNet will use the "encounter" option (as described in the final rule) for all eligible professionals. MO HealthNet coordinates with its border states, as needed to confirm out of state volumes reported.

Eligible Professionals (EPs)

Eligible professionals (EPs) will need to have a number of items verified, including:

- The provider is registered in the R&A System
- A valid state license and respective credentials for provider type
- Enrolled as a Medicaid provider or performing services for an entity enrolled as a Medicaid Provider (e.g., MCO, FQHC, etc.).
- Verification that the provider is not an excluded provider using data in R&A System
- Use of Medicaid claims or encounter data as a proxy to verify Medicaid volume

To ensure that statutory threshold requirements are met, MO HealthNet will require that each provider:

- Attest to meeting Medicaid (or "needy individual") patient volume requirements, including:
    - CHIP patients funded through Title XIX and XXI Medicaid expansion programs
    - Medicaid claims and encounters, regardless of payment liability
- Attest the EP is not hospital based, excluding those that can demonstrate use of their own funds for acquisition, implementation and maintenance of certified EHR technology
- Indicate whether the volume will be met via individual eligible provider data or group practice data (for EPs only)
- Report the numerator, denominator, and 90-day representative period from either the previous calendar year or most recent 12-month period
- Attest to encounters with panel members up to 24 months

EPs who work predominantly in FQHCs or Rural Health Centers (RHCs) may meet volume requirements using a six-month period within the prior calendar year or the preceding 12 month period based on "needy individual" patient volume. Needy individuals are defined as having met one of following criteria:

- Received medical assistance from MO HealthNet or MO HealthNet for Kids (Missouri's State Children's Health Insurance Program); or
- Were furnished uncompensated care by the provider; or
- Were furnished services at either no cost or reduced cost based on a sliding scale determined by the individuals' ability to pay.

Federally Qualified Health Centers (FQHCs)

FQHCs issues addressed in the planning process focused mainly on how incentives will be treated on cost reports and the physician assistant "so led" criteria. It is expected that many FQHC-employed providers will re-assign their incentive payment to their employer. MO HealthNet considers this a contracting/staffing issue between employer and employee that does not require MO HealthNet involvement. MO HealthNet is currently pursuing the appropriate action to ensure that reassigned payments would be excluded from FQHC cost reports and therefore would not need to be offset. Missouri does not allow for Physician Assistant independent practice and there are a few FQHCs that meet the "so led" requirements.

EPs practicing within FQHC/RHC must identify the representative 6 month period either from the most recent 12 months or the most recent calendar year.

Eligible Hospitals (EHs)

EHs will need to have a number of items verified, including:

- A valid state license.
- A Medicare CMS Certification Number (CCN) in the appropriate range.
- Average length of stay and Medicaid volume based on MO HealthNet data.
- A state-issued provider number.

For Acute Care and Critical Access Hospitals to meet the required 10 percent Medicaid volume, MO HealthNet allows hospitals to calculate volume based on patient discharges, including ER visits that result in inpatient stays.

Any hospital that has a new CCN including a new facility/entity or those with a change in status or a change of ownership must have 2 years of cost report data associated with the new CCN prior to submitting an application for incentive payments as the new entity.

Border States

Missouri shares a border with eight states (Iowa, Illinois, Kentucky, Tennessee, Arkansas, Oklahoma, Kansas and Nebraska). The most significant medical trading area is on the western Missouri-Kansas border, and is centered in the Kansas City metropolitan region. MO HealthNet's approach for eligibility verification is agnostic as to the patient's state of residence. Therefore, any patient encounter will count toward a provider's eligibility threshold. At this time, MO HealthNet maintains contact information to the respective State Medicaid Agency. As information is available about Missouri's border states' administration of their respective incentive programs, MO HealthNet may adjust its approach accordingly. Regular venues to communicate with contacts in other states are available and contacts regarding specific providers occur on an as needed basis.

The sequencing and interface with CMS R&A System during the Provider Registration and Eligibility workflow is illustrated in the figure below.

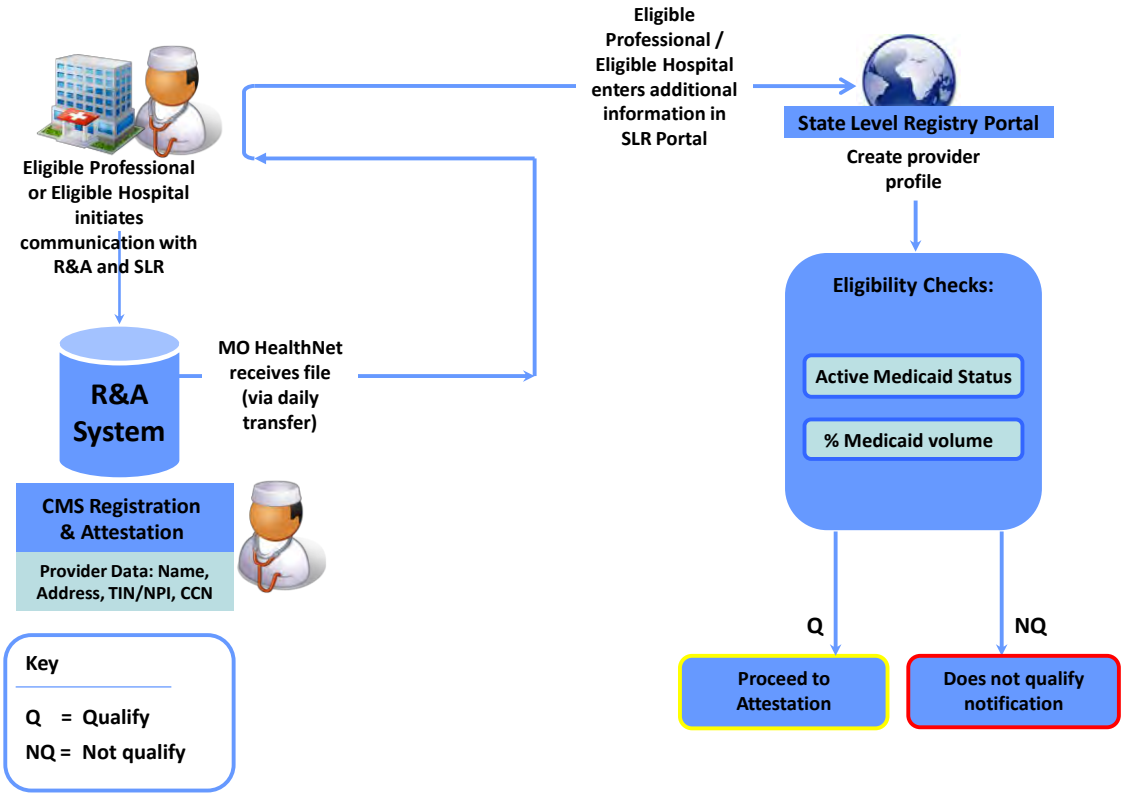


Figure 19: Provider Registration and Eligibility Workflow

4.4 Verification and Attestation AIU Process

Summary

It is the expectation that most, if not all, Missouri providers who enter the program will do so by demonstrating they have met the AIU requirement, as outlined in the meaningful use final rule. Therefore, the verification workflow process for the program's first year focuses on accepting attestations for the AIU requirement and review of the signed contract. MO HealthNet is prepared to accept meaningful use attestations for professionals and hospitals deemed to have met Medicare meaningful use requirements. The Provider Attestation and AIU Workflow process is outlined in Figure 20. Subsequent year verifications and attestations will be outlined in the next process flow.

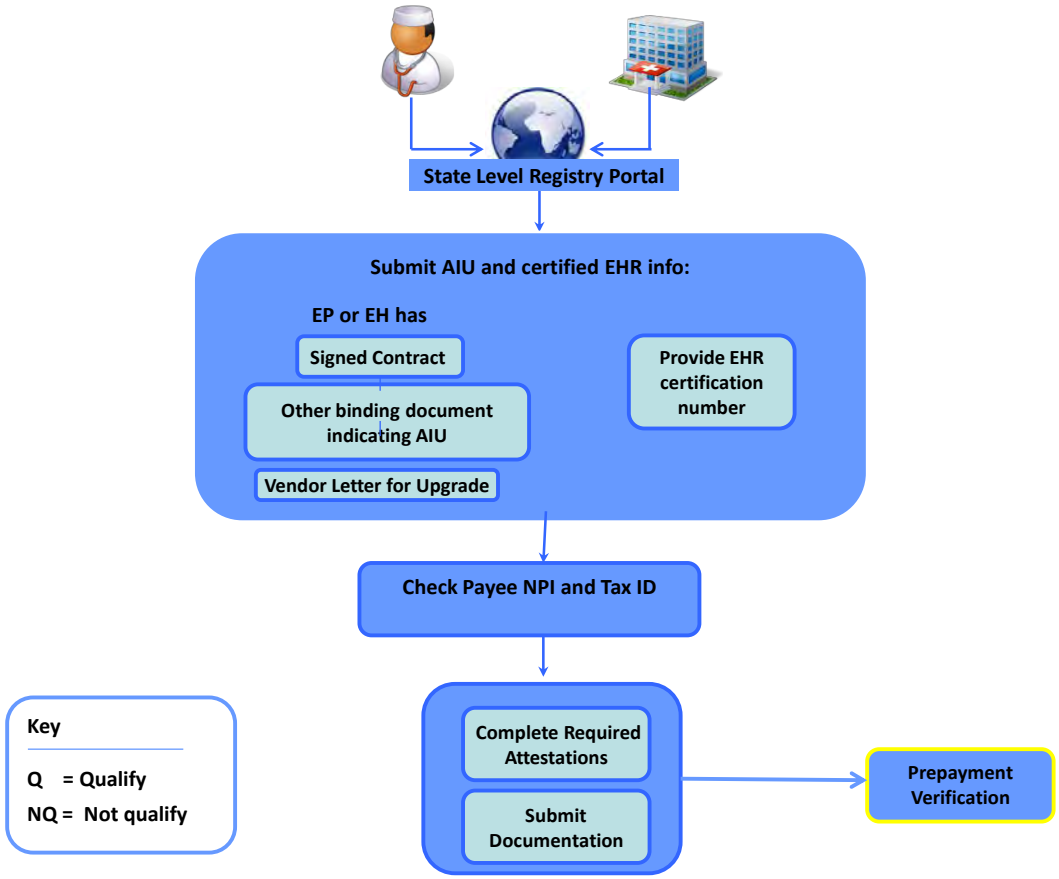


Figure 20: Verification & Attestation AIU

Verification and AIU Attestation Process Steps

The AIU verification process includes the submission of attestations and documentation, outlined below and reflected in Figure 213:

- Provide attestation for certified EHR technology purchase or upgrade and submit a signed copy of agreement to purchase or vendor letter for upgrade. Providers will be notified that these documents must be available for audit purposes.
- Update, as necessary, information contained in the provider profile (gathered during the Registration and Eligibility process).
- Provide the CMS EHR Certification Number, which is manually checked by MO HealthNet staff.
- If at any point a requirement is not met, the provider receives a MO HealthNet communication explaining the reasons they do not meet program requirements.

4.5 Verification & Meaningful Use Attestations

Summary

MO HealthNet has implemented a change in the workflow sequencing for participating professionals and hospitals beginning with provider year 2. This change reflects two main factors. First, because program participation is limited to six years, SLR will need to verify the number of years that provider has been enrolled and an incentive payment has been made. Second, the system must determine compliance with current stage meaningful use criteria, as outlined in the final rule. The sequencing of these activities is outlined in Figure 213.

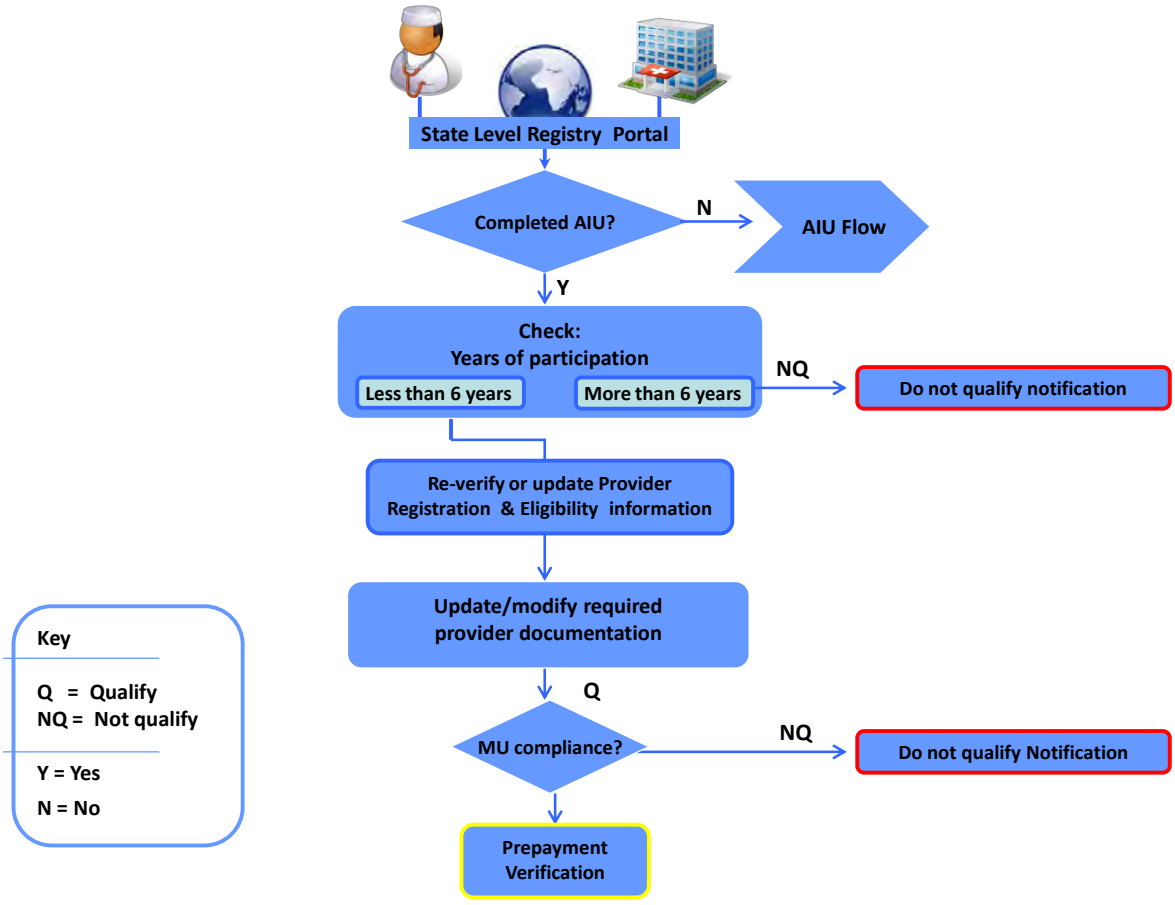


Figure 213: Verification & Attestation in Subsequent Years

Verification & Attestation (Subsequent Years) Steps

Verifying EP and EH information after provider year 1 in the program involves a number of key workflows, as outlined by the following:

- EP or EH accesses the R&A System and SLR provider portal.

- If this is the first participation year for the EP or EH, then the AIU process outlined in Figure 20 is completed.
- If it is not the first participation year for the EP or EH, then MO HealthNet will ensure that program participation has been five years or less (to comply with the six-year participation limit for Medicaid incentives).
- The EP or EH will then review their provider profile, consisting of information from the R&A System and information provided during the Registration and Eligibility process. Updates will be made as necessary; documentation will be submitted as required.
- Finally, the EP or EH will transmit the required numerator and denominator information as part of the Stage 1 meaningful use requirements. MO HealthNet will continue to work with ONC and CMS to ensure system design will be adequate to meet the requirements of future stages of meaningful use.

If at any point a requirement is not met, the provider receives a MO HealthNet communication explaining the reasons why program requirements were not met. SLR system notifications inform the provider immediately if any of the meaningful use measures requirements are not met.

CMS has indicated that dually eligible EHs will submit meaningful use attestations to CMS; once determined to fulfill this criteria for the Medicare EHR incentive program, EHs will be deemed to have also met this criteria for the Medicaid EHR incentive program. The SLR accepts the documentation in the C5 file exchange with CMS.

Medicaid Stage 1 Meaningful Use Changes

MO HeathNet recognizes that Stage 2 Final Rule will require some changes to SLR related to system attestation criteria to process Stage 1 MU attestations beginning in 2013. MO HealthNet has conducted a preliminary assessment of impact of Stage 1 changes published in the Stage 2 Final Rule. Xerox Heritage submitted SLR screen changes for CMS approval on behalf of States using the SLR on November 1, 2012, and received CMS approval on November 15, 2013, prior to beginning work on the system.

In Stage 2 Final Rule, CMS finalized the ability to use a batch reporting process for meaningful use, which will allow groups to submit attestation information for all of their individual EPs in one file. MO HealthNet will investigate the feasibility of accepting batch attestations; no decision is available until this analysis is complete.

Table 8: Analysis of Meaningful Use Stage 1 Changes

Proposed Change	Comments/Status
Practicing Predominantly Calculations (RHCs and FQHCs): Allow EPs to use a six-month period within the prior calendar year or preceding 12 month period for the date of attestation for the definition of practicing predominantly (more than 50% of the encounters).	MO HealthNet will allow this option. EPs electing to use the most recent 12 month period may have approval delayed until sufficient claims are submitted for MO HealthNet to validate volume. System changes will be made to accept encounters from the most recent 12 months.
At least 50% of EP outpatient encounters used for EP patient volume is required at a location	No system change required. The existing functionality in SLR verifies 50% of encounters

Proposed Change	Comments/Status
equipped with certified EHR technology during the payment year for which the EP is attesting.	are at locations with certified EHR technology.
Medicaid Enrolled Encounters: The rule expands the definition of what constitutes a Medicaid patient encounter, to include zero pay claims and encounters with patients in the Title XX!-funded Medicaid expansions but not separate CHIP programs. Numerator includes service rendered on any one day to a Medicaid-enrolled individual regardless of payment liability.	No system change required. MO will recognize the expanded definition of encounters for EPs. The existing functionality in SLR accepts total number of encounters reported. User manual, workbook and help text will be revised to include the expanded definition of encounters for EPs.
CHIP Encounters: Provider patient volume includes CHIP encounters in the numerator if part of the Title XIX expansion or part of Title XXI expansion (still cannot include CHIP stand-alone Title XXI encounters).	Missouri has a combination CHIP program and will recognize encounters for patients who are Title XIX and SSI funded Medicaid expansions for patient volume calculations.
Provider, Panel and Needy Individual Patient Volume: Add an option for providers to elect to use either a 90 day period in the previous calendar year or a 90 day period in the 12 months immediately preceding the attestation.	This is an either/or scenario. MO HealthNet will allow this option. EPs electing to use the most recent 90 day period for MU reporting may have approval delayed due to claims lag until sufficient claims are received to validate claims volume. System change is required.
Hospital Based Exclusion: EPs who can demonstrate that they fund the acquisitions, implementation, and maintenance of CEHRT, including supporting hardware and interfaces needed for meaningful use without reimbursement from an eligible hospital or CAH —and use such CEHRT at a hospital, in lieu of using the hospital's CEHRT—can be determined non-hospital based and receive an incentive payment.	Minimal impact. Xerox Heritage will submit SLR sample text for CMS approval on behalf of the States regarding SLR system changes.
Children's Hospital definition is revised to include any separately certified hospital, freestanding or hospital within a hospital that predominately treats individuals under age 21 without a CMS certification number because these facilities do not serve Medicare beneficiaries. These hospitals will be issued an alternative number by CMS to enroll in the incentive program. There is potential change to CMS interface to accept new number.	No change. All Children's Hospitals in Missouri currently have an assigned CCN and are able to participate in the EHR Incentive Program.
EH Calculation to allow use of information from the most recent continuous 12 month period.	MO HealthNet will continue to use cost reports from prior year to calculate EH payments; information on discharges within the most recent continuous 12 month period will not be allowed.
Allow Hospitals to switch States – Include capability to capture historical information from another state and use captured data to calculate the hospital incentive payment from the previous state and year to ensure the calculated amount is	Missouri currently has only one out-of-state hospital attesting and has no knowledge of other out-of-state hospitals wanting to change from another state to Missouri. If MO is contacted by a hospital in another state MO HealthNet will work

Proposed Change	Comments/Status
correct.	with the provider to accommodate this requirement.
CMS proposed MU auditing/ appeals for Medicaid only hospitals	MO HealthNet plans to allow CMS to do the EH MU auditing/appeals.
Stage 1 Computerized Physician Order Entry (CPOE) alternate objective: more than 30% of medication orders created by the EP or authorized providers of the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period is recorded using CPOE).	Optional for 2013 forward for providers attesting to Stage 1 of MU. Xerox Heritage will submit for CMS approval on behalf of the States regarding SLR system change.
Stage 1 ePrescribing – Add an exclusion for any EP who does not have a pharmacy within their organization and there are no pharmacies that accept electronic prescriptions within 10 miles of the EP's practice location at the start of his/her EHR reporting period.	Required for 2013 forward for EPs attesting to Stage 1 of MU. Xerox Heritage will submit for CMS approval on behalf of the States regarding SLR system change.
Stage 1 Vital Signs change – add second denominator definition with ability for EP to indicate which denominator is being used for reporting. More than 50% of all unique patients seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department during the EHR reporting period have blood pressure for patients age 3 and over only and height and weight for all ages recorded as structured data. (Optional)	Optional for 2013 only. Xerox Heritage will submit for CMS approval on behalf of the States regarding SLR system changes.
Stage 1 Vital Signs exclusions change – Modify exclusions to allow BP to be separated from height/weight. Any EPs who 1) see no patients 3 years or older are excluded from recording blood pressure; 2) believe that all three vital signs of height, weight, and blood pressure have no relevance to their scope of practice are excluded from recording them; and 3) believe that height and weight are relevant to their scope of practice, but blood pressure is not, are excluded from recording blood pressure, or 4) believe that blood pressure is relevant to their scope of practice, but height and weight are not, are excluded from recording weight and weight. (Optional)	Optional for 2013 only. Xerox Heritage will submit for CMS approval on behalf of the States regarding SLR system changes.
Stage 1 Test of electronic transmission of key clinical information. (Mandatory removal for 2013 and beyond)	Mandatory removal for 2013 and beyond. Xerox Heritage will submit for CMS approval on behalf of the States regarding SLR system changes.

Proposed Change	Comments/Status
Stage 1 Report ambulatory (hospital) clinical quality measures to CMS or the states (Mandatory removal for 2013 and beyond)	Mandatory removal for 2013 and beyond. Xerox Heritage will submit for CMS approval on behalf of the States regarding SLR system changes.
Stage 1 Public Health Objectives (Mandatory removal for 2013 and beyond)	Mandatory for 2013 and beyond. Xerox Heritage will submit for CMS approval on behalf of the States regarding SLR system changes.

Meaningful Use Stage 2

Xerox Heritage submitted SLR screen shots for 2014 changes to Stage 2 meaningful use measures for CMS review on behalf of States using the SLR on July 8, 2013, and received CMS approval on July11, 2013. No additional changes to processes are required to accept attestations for 2014 at this time.

4.6 Payment Process

Summary

The payment process involves a number of important activities both to ensure appropriate stewardship of public funds as well as to leverage existing MMIS functionality. Figure 22 represents the steps in the payment process.

In order to separately track expenditures, a separate accounting code will be used. The administrative funds related to the EHR incentive program will also be associated with a separate accounting code such that all funds associated with the Medicaid EHR Incentive Program can be appropriately budgeted for and reported on as required by CMS.

At this time, MO HealthNet does not anticipate designating an entity promoting adoption such that a provider could assign their incentive payment.

Eligible Professional Payments

MO HealthNet will calculate EP incentive payments in a manner that is consistent with both statutory requirements and federal rulemaking.

The EPs will receive incentive payment not to exceed $21,250 in the first year or maximum of $8,500 in years 2-6. In no case shall an EP participate for longer than six years or receive payment in excess of the maximum $63,750. Per §495.310, an EP may not begin receiving payments later than calendar year 2016. EPs may receive payments on a non-consecutive, annual basis. No payments may be made after calendar year 2021. MO HealthNet anticipates that payment calculation for EPs will be automated within the SLR.

Pediatricians attesting to a patient volume between 20% - 29% will receive 2/3 of the incentive payment amount. The Pediatrician will not receive more than $14,167 in the first year and not

more than $5,667 for subsequent years. The total incentive payments for six years will not exceed $42,500.

Medicaid Managed Care

MO HealthNet will process applications from EPs who participate in MO HealthNet through its managed care plans. MO HealthNet does not intend to utilize the health plans for purposes of disbursement activities for health plan enrolled EPs. Initially MO HealthNet established a process to verify managed care provider identification in order to confirm volume attestations. MO HealthNet now requires plans to submit NPIs for all participating providers, eliminating the need for additional outreach to confirm identify and associate encounters with specific professionals.

Eligible Hospital (EH) Payments

The SLR calculates the hospital payments based on CMS rules for calculation, and determines the annual amount according to MO HealthNet's three year schedule of payments, described below.

MO HealthNet plans to disburse EH payments over a three-year period with disbursements contingent upon successful attestation. After consultation with MHA, and considering CMS payment requirements (i.e., requirements that no annual payment may exceed 50 percent of the calculation and no two-year payment can exceed 90 percent), MO HealthNet plans to disburse on the following payment schedule:

- Year 1: 50 percent of aggregate payment amount
- Year 2: 35 percent of aggregate payment amount
- Year 3: 15 percent of aggregate payment amount

This calculation will be based on hospital cost report data stored electronically including an electronic database with selected information, electronic desk review files prepared by MO HealthNet cost report auditors, specific worksheets submitted electronically as part of the application, and full cost report files (paper versions with supplemental packets). For hospitals with payment calculations made using unaudited cost reports, MO HealthNet will recalculate the payment amounts using the audited reports in the second payment year, and adjust year 2 and year 3 payments to reflect changes as necessary. Payment adjustments will be reported to CMS using the D18 exchange beginning in late 2012.

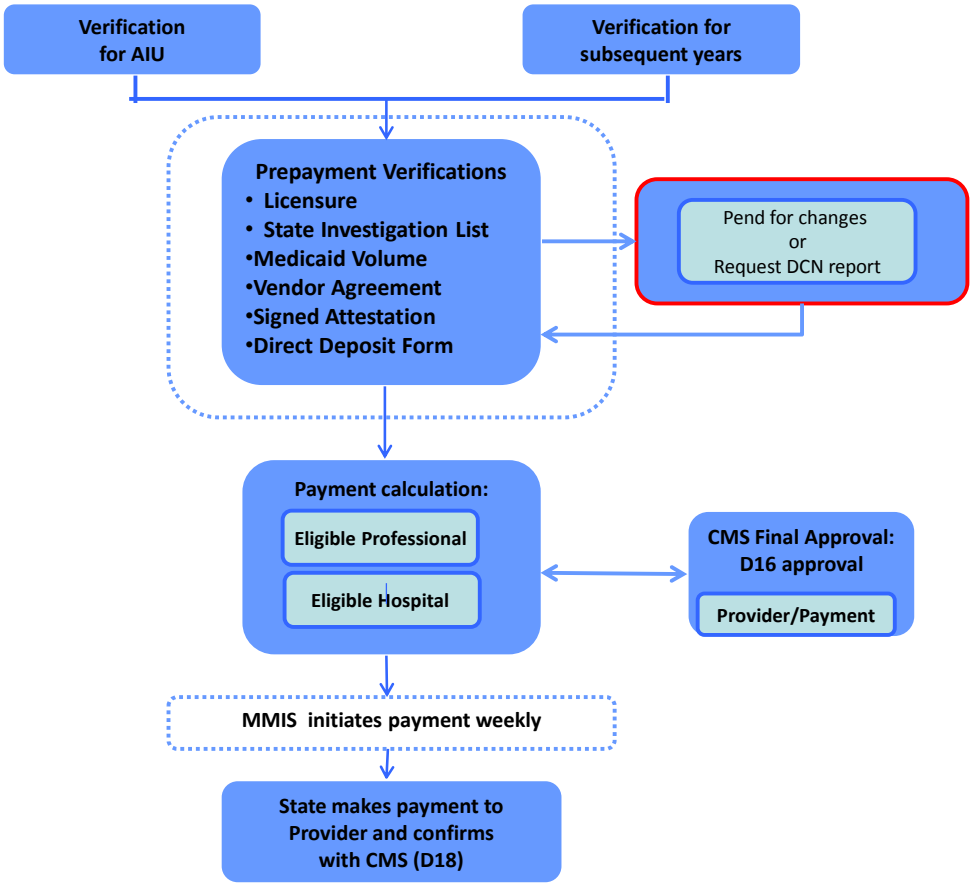


Figure 22: Process for EHR Incentive Payments

Payment Process Steps

Whether it's the first or subsequent payment years, the process follows the same general steps:

- After the verification process, MO HealthNet will use state licensing and sanction records to ensure the provider is in good standing and is licensed under the appropriate provider type. These data (e.g., licensing, disciplinary action, sanctions) are updated by the Missouri Board of Healing Arts on a daily basis
- MO HealthNet will then confirm, via the R&A System, the Office of the Inspector General (OIG) exclusion check, along with the verification that Medicare and payments from other states were not received by the EP.
- MO HealthNet has submitted a plan to address vulnerabilities previously identified in our provider enrollment and auditing processes (Addendum 2). Implementation of proposed improvements is underway within our Missouri Medicaid Audit and Compliance office.
- Once these checks are complete, a provider is deemed eligible to receive the incentive.

- Payments are calculated per the statutory guidelines and regulations included in the final rule.
- The payment amount calculated in the SLR is used to create a weekly spreadsheet, which is then entered into a weekly MMIS payment process. The state uses direct deposit for all incentive payments.
- The MO EHR Incentive Program was implemented April 1, 2011. Providers submit attestation and related information to SLR as described in section 4.4. Payment follows within 45 days of approval, per CMS prompt payment guidelines.

Federal Financial Participation Drawdown

MO HealthNet has also established a process for reimbursement as part of the Federal Financial Participation (FFP). This process is represented in Figure 23 and includes the following steps:

- MO HealthNet identifies the incentive payment amount and administrative costs.
- MO HealthNet submits these amounts to CMS and is reimbursed.

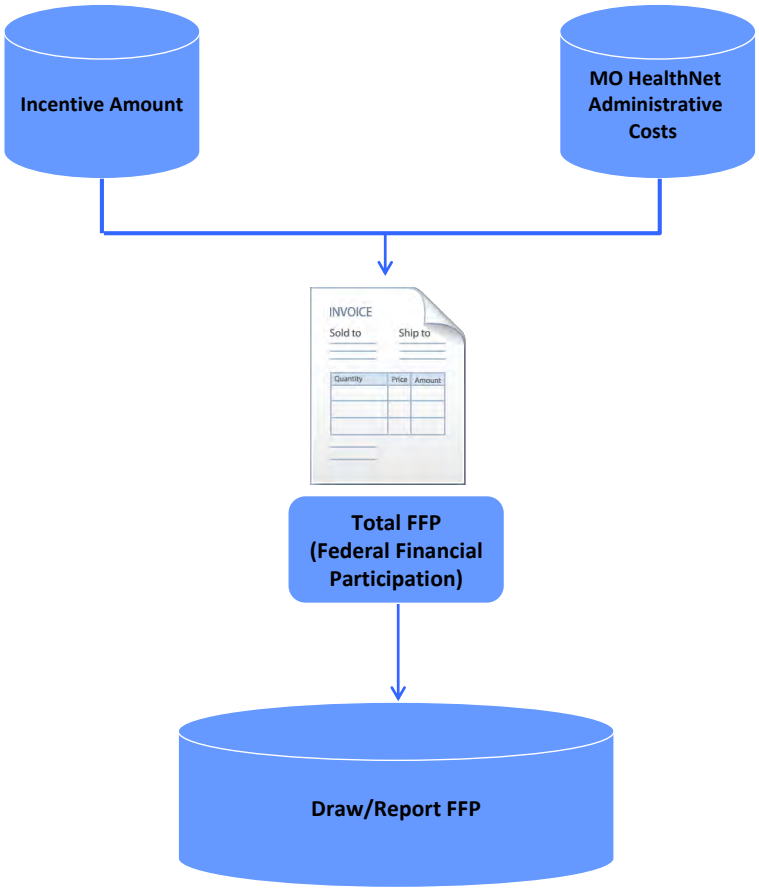


Figure 23: Federal Financial Participation

4.7 Appeals

Summary

MO HealthNet envisions the following circumstances may be raised by providers if incentive payments are denied or there is the belief that the incentive payment calculation was incorrect:

- Eligibility determination
- Patient volume threshold decisions
- Meaningful use demonstrations
- AIU attestations
- Provider location (e.g., hospital-based)
- Practicing predominantly in an FQHC or RHC
- Hospital qualification (e.g., acute care, children's hospital)

In order to most efficiently offer providers redress, MO HealthNet will take two approaches to the appeal process, as depicted in Figure 24. The first step serves as an opportunity for the provider to request additional information about the denial. Providers will send a certified letter outlining concerns related to eligibility determinations or payment amounts to MO HealthNet or its audit contractor. The issue will be researched and MO HealthNet will contact the provider with the result.

The second step is the formal appeals process, currently used for Medicaid payment denials and governed by Missouri Statute (208.156). The statute indicates that any MO HealthNet service provider is entitled to a hearing before the Administrative Hearing Commission (AHC) on a final decision of the MO HealthNet Division. This step will be utilized if a provider either is not satisfied with the outcome from, or does not want to engage in, step one. If a provider is adversely affected by a denial decision, s/he can file an appeal through the AHC. The AHC has jurisdiction in statutorily specified matters including State tax, professional licensing, and Medicaid provider issues. All decisions are subject to judicial review.

The AHC also contracts with other Missouri agencies to assist in their decision-making processes. In such cases, the Commission conducts the proceedings but only makes a recommended decision to the agency. The agency makes the final decision. This process will be consistent with the requirements as outlined in §447.253(e).

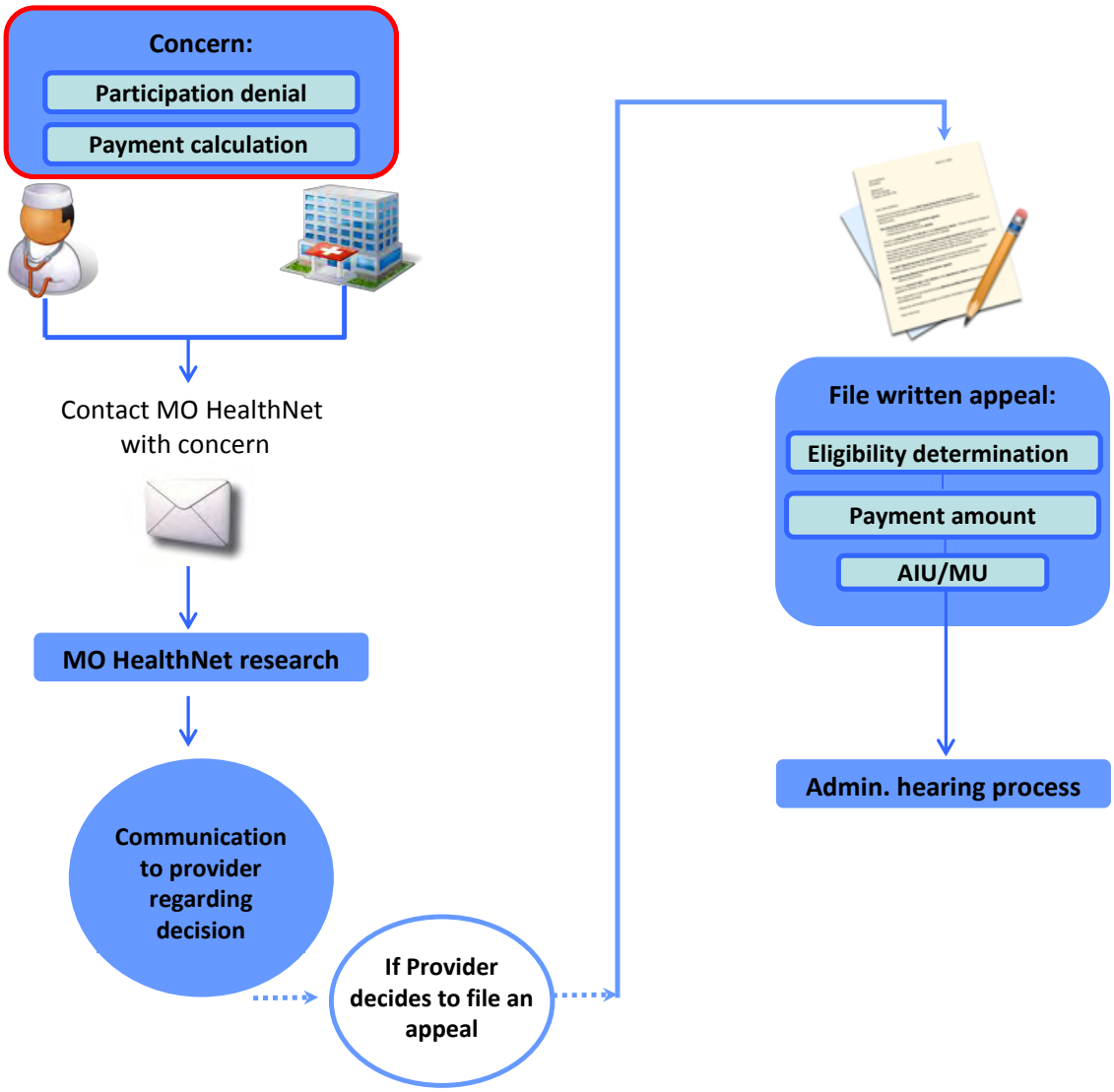


Figure 24: Appeals Process

Appeals Process Steps

- EP or EH receives a notification that they do not qualify for the Medicaid EHR Incentive Payment or there is the belief that the payment calculation is incorrect.
- The EP or EH sends a registered letter outlining concern to MO HealthNet.
- MO HealthNet researches the issue and contacts the provider with a determination.
- If EP or EH is not satisfied with the determination, they will file an appeal.
- The appeal will be processed via the Administrative Hearing Commission (AHC), as outlined above.
- The EP or EH will receive final notification via the AHC.

5 SECTION D: MISSOURI'S AUDIT STRATEGY

Over the past six months, the State participated in a lengthy process to develop a detailed Audit Plan for monitoring the EHR Incentive Program. DSS will leverage state and contractor resources for audits and to implement the audit program and services described in the Audit Plan. The State received approval of the Audit Plan from CMS on October 23, 2012.

5.1 Program Integrity and Oversight

In Missouri, Program integrity activities are performed within the DSS, Missouri Medicaid Audit and Compliance (MMAC) Unit. Oversight for program integrity and audit functions related to the Medicaid EHR Incentive Program will be coordinated with the MMAC Unit.

The objectives of the audit program are to verify the accuracy of providers' attestations and eligibility for the EHR Incentive Payment Program, as well as to ensure that the staff and contracted resources administer the program and apply the rules, guidelines and policies appropriately.

The Program Integrity Post Payment Audit Process Summary is described in Section 1.3 of the Audit Plan.

Postpayment audit includes both desk audit and field audit activities that will be conducted on a risk-based sample of providers

DSS will leverage current procedures for handling suspected Medicaid fraud and abuse.

Refer to Missouri's approved Medicaid EHR Incentive Program Audit Plan for a detailed description of our audit strategy and planned monitoring activities.

5.2 Methods Used to Avoid Improper Payments

Refer to Missouri's approved Audit Plan (Table 2) for an overview of the steps DSS will take to mitigate erroneous payments, fraud, waste, and/or abuse in the determination of provider eligibility and the distribution of payments under the Medicaid EHR Incentive Program.

5.3 Data Sources

The data sources used for review during audits are described in Missouri's approved Audit Plan (Table 2).

5.4 Payment

To ensure proper payment procedures, MO HealthNet and its contractor, as appropriate, will:

- Rely upon the CMS R&A System exchange to identify duplicate payments between Medicare and Medicaid or other state programs
- Rely upon the SLR to ensure EP payments at the required payment amount
- Rely on pre-payment validation to ensure that hospital payments are consistent with funding schedules

Payments will be initiated and tracked through existing functionality within the MMIS.

5.5 Payment Recovery

MO HealthNet payment recovery activities will model and leverage existing processes using the process as described in the Audit Plan Section 2.4. When overpayments are detected via the audit process, DSS will initiate the appropriate recovery action in a timely manner.

5.6 Reduce Burden to Providers

In developing the audit strategy, consideration was given to developing an audit plan that would reduce provider burden (e.g., by leveraging existing data sources such as the MMIS data when appropriate) and maintain integrity and efficiency of the oversight process.

6 SECTION E: MISSOURI'S HIT ROADMAP

6.1 Overview

MO HealthNet leadership believes that health IT is crucial to transforming Missouri's health care system and that MO HealthNet should take a leadership role in the promotion of HIE and adoption of MHC's Direct Secure Messaging and the Patient Query Services. Key components of this transformation include supporting adoption of electronic health records (EHRs), a reengineered Medicaid Management Information System (MMIS); adoption of MHC's direct secure messaging services by MO HealthNet and its partner State Agencies, DMH and DHSS, and connecting Missouri Medicaid to the HIE for sharing Medicaid claims. MO HealthNet has been sharing Medicaid claims data with Medicaid providers through the CyberAccess web portal for several years to support key Medicaid business functions, including the prior authorization and pre-certification of services, case management and for care coordination. At the provider level, CyberAccess offers patient-specific histories, risks, gaps-in-care, reporting, and treatment alerts at the point of care. The goal is to provide a clear understanding of the patient's previous care and indicators to encourage potential quality of care improvements among all connected partners. MO HealthNet will further this effort by sharing Medicaid medical and pharmacy claims data through the HIE for consumption into participating provider EHRs. Combined, these activities will dramatically increase the amount of data available in electronic format among and across settings. This section outlines how MO HealthNet will progress from its current state to the proposed goal state over the next five years. Figure 25 reflects the activities and services that will be provided through MHC's statewide network that the state is seeking to accomplish.

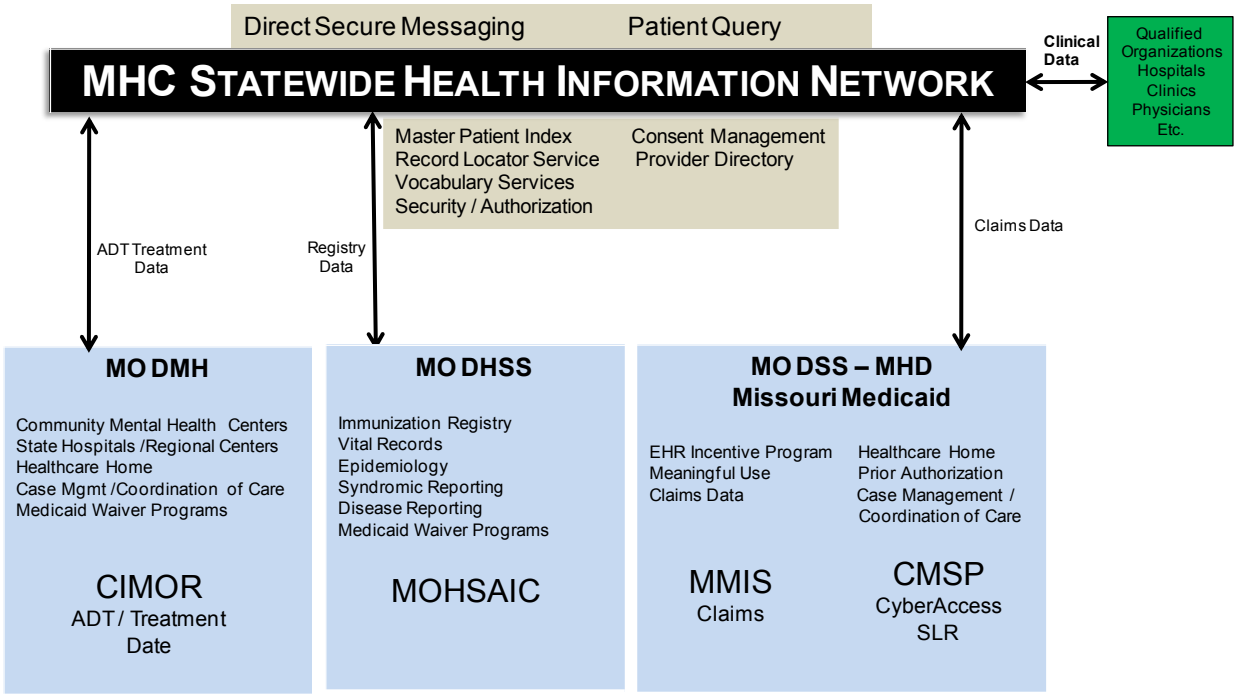


Figure 25: MO HealthNet Approach to Health Information Exchange

6.2 Support EHR Adoption

Adoption of EHRs by Missouri's providers is a cornerstone of an efficient health care delivery system that is able to leverage health information to improve the quality of medical decision-making and care coordination. MO HealthNet is taking an active role in supporting this adoption in a number of ways. For example, MO HealthNet is collaborating with the Missouri Primary Care Association to make the best use of its Health Resources and Services Administration grants and facilitate full participation by FQHC-employed physicians in the incentive program. MO HealthNet is also committed to making a low-cost EHR technology available to providers; as a partner in statewide HIE planning efforts, MO HealthNet will ensure that all of its providers have access to CyberAccess or a certified EHR. Combined with promotion of the Medicaid EHR Incentive Program, MO HealthNet believes these activities will facilitate adoption and ultimately improve the landscape for both providers and patients.

Administer Medicaid EHR Incentive Program

MO HealthNet recognizes the effort and resources required to implement and administer the Medicaid Electronic EHR Incentive Program as described in the previous sections, and is currently undergoing planning efforts to procure a provider registry and upgrade the current provider enrollment tool to support program administration. In an effort to monitor, track, and adjust MO HealthNet's strategy, MO HealthNet has set goals and benchmarks for provider enrollment and participation, and will monitor progress toward these goals. These benchmarks, reflected in Table 9, include estimates of the providers and hospitals that will enroll in the

Medicaid EHR Incentive Program over the next five years. MO HealthNet anticipates that in the second year of the program, when meaningful use must be demonstrated, enrollment and eligibility for incentives will not increase significantly from enrollment under Adopt, Implement and Upgrade requirements. In addition, because hospital incentives are significantly larger than those for physicians, MO HealthNet estimates higher enrollment for eligible hospitals.

The methodology used in developing these projections was based on a number of factors, including information gleaned from the provider survey indicating interest in the incentives and current levels of EHR adoption. The projections assume significant participation in year one, a small increase in year two when demonstrating meaningful use is required, and then incremental expansion.

Table 9: Medicaid EHR Incentive Program Over 5 Years

Provider Type	Eligible Providers & Hospitals (Estimated)	Medicaid EHR Incentive Program Enrollment (Projected) Year 1	Year 2	Year 3	Year 4	Year 5
Eligible Professionals	598	299	310	400	450	500
Physician (MD)	125	65	70	85	95	105
Physician (DO)	298	150	165	210	240	270
Physicians in MCOs	73	37	40	48	55	65
Nurse Practitioners	5	3	4	4	4	5
Dentists	^	*	*	*	*	*
Total	**1099**					
Eligible Hospitals						
Acute Care Hospitals	71	48	56	63	65	70
Children's Hospitals	4	3	3	4	4	4
Critical Care Hospitals	15	9	10	13	14	15
Total	**90**					

*Projected enrollment for dentists is not available at this time.

MO HealthNet implemented the Xerox State Level Repository as its EHR Incentive Program system solution. Table 10 outlines the milestone dates met to launch the MO HealthNet EHR Incentive Program.

Table 10: Medicaid EHR Program Timeline

Deliverable	Start Date	End Date
Program Implementation		
Submit Draft SMHP for CMS Review	9/01/2010	09/30/2010
Test State-Federal NLR interfaces (completed)	10/21/2010	11/30/2010
Receive Provider Survey Results	11/01/2010	11/30/2010
Submit SMHP and IAPD for CMS Approval	11/30/2010	11/30/2010
Submit Revised IAPD and SMHP Addendum for CMS Approval	1/30/2011	3/01/2011
Launch Program	04/01/2011	05/31/2011

Deliverable	Start Date	End Date
Email blasts: announce program launch	04/11/2011	04/11/2011
Begin Accepting Attestations	06/01/2011	06/01/2011
Begin Issuing EHR Incentive Payments	07/26/2011	8/29/2011
Continued EHR Incentive Payments (A/I/U)	8/30/2011	Ongoing
Coordinate Provider Incentive Payment Program Year 2012 Implementation		
Define Meaningful Use Requirements	6/1/2011	8/30/2011
CMS Review & Approval MU Screens	9/27/2011	12/22/2011
SLR MU User Acceptance testing	2/1/2012	2/29/2012
Receive Provider Year 2 (MU) Attestations	4/5/2012	Ongoing
Continue Processing AIU and MU EHR Incentive Payments		Ongoing
Provider Webinars	6/30/2012	Ongoing
Submit IAPD U for CMS Approval	8/17/2012	6/06/2013
Submit SMHP Audit Plan Appendix for CMS Approval	9/05/2012	10/23/2012
Submit Audit Contract for CMS Approval	10/02/2012	11/26/2012
Submit SMHP U for CMS Approval	11/15/2012	1/17/2013
Retain Audit Contractor for Post Payment Audits	12/15/2012	12/15/2012
Coordinate Provider Incentive Payment Program Year 2013 Implementation		
Define Meaningful Use Requirements for 2013	07/15/2012	9/30/2012
CMS Review & Approval MU Screens	11/01/2012	11/15/2012
SLR MU User Acceptance testing	11/22/2012	2/14/2013
Implement Meaningful Use Attestation data collection solution for 2013 changes	4/01/2013	Ongoing
Receive Provider Year 2 (MU) Attestations	4/5/2013	Ongoing
Continue Processing AIU and MU EHR Incentive Payments		Ongoing
Conduct Post Payment Audits (PY 2011)	3/26/2013	9/30/2013
Coordinate Provider Incentive Payment Program Year 2014 Implementation		
Define Meaningful Use Requirements for 2014	07/15/2013	9/30/2013
CMS Review & Approval MU Screens	7/08/2013	7/11/2013
SLR MU User Acceptance testing	12/10/2013	12/18/2013

6.3 MMIS Reengineering

Several of the 19 MMIS enhancements have been implemented and a range of system enhancements are planned for implementation within the next three years. These deliverables, with associated implementation dates, are outlined in Table 11.

Table 11: MMIS Schedule of Deliverables

MMIS Component (selected)	Purpose/Benefit	Implementation Date
Centralized Prior Authorization	Automated a manual process to improve care reduce duplicate services	Implemented in 2009
Correspondence Imaging and Automated Workflow	Automation of workflow/document handling for efficiency and accountability	Implemented in 2009
Browser-Based End User Screens	Graphical user interfaces to improve user productivity	Implemented in 2010
Audit Trails	Records online and batch transaction processing activity	Implemented in 2010
Enterprise Service Bus Interface	Provides a means to capture, interpret, transport and exchange data	Implemented in 2010
Online Real-Time Transactions Processing	Eliminates nightly batch processing and improves MMIS responsiveness	Implemented October 2013
Web Services Technologies	Allows for migration toward advanced generations of application software	Implemented in 2010
Meta-Data Management	Centralized repository for MMIS transaction data	Ad Hoc/SUR: Implemented in July 2011; MAR: TBD
Relational database management	MMIS to industry standard for data storage and retrieval	Phase 1: Implemented July 2011 Phase 2: Implemented October 2013
Rules Engine	MMIS operational efficiency	Phase 1: Implemented July 2011 Phase 2: TBD
HIPAA II Data Exchange and Code Sets	Nationally mandated data exchange standards compliance	January 2012 (ICD-10: October 2014)

CyberAccess Rollout

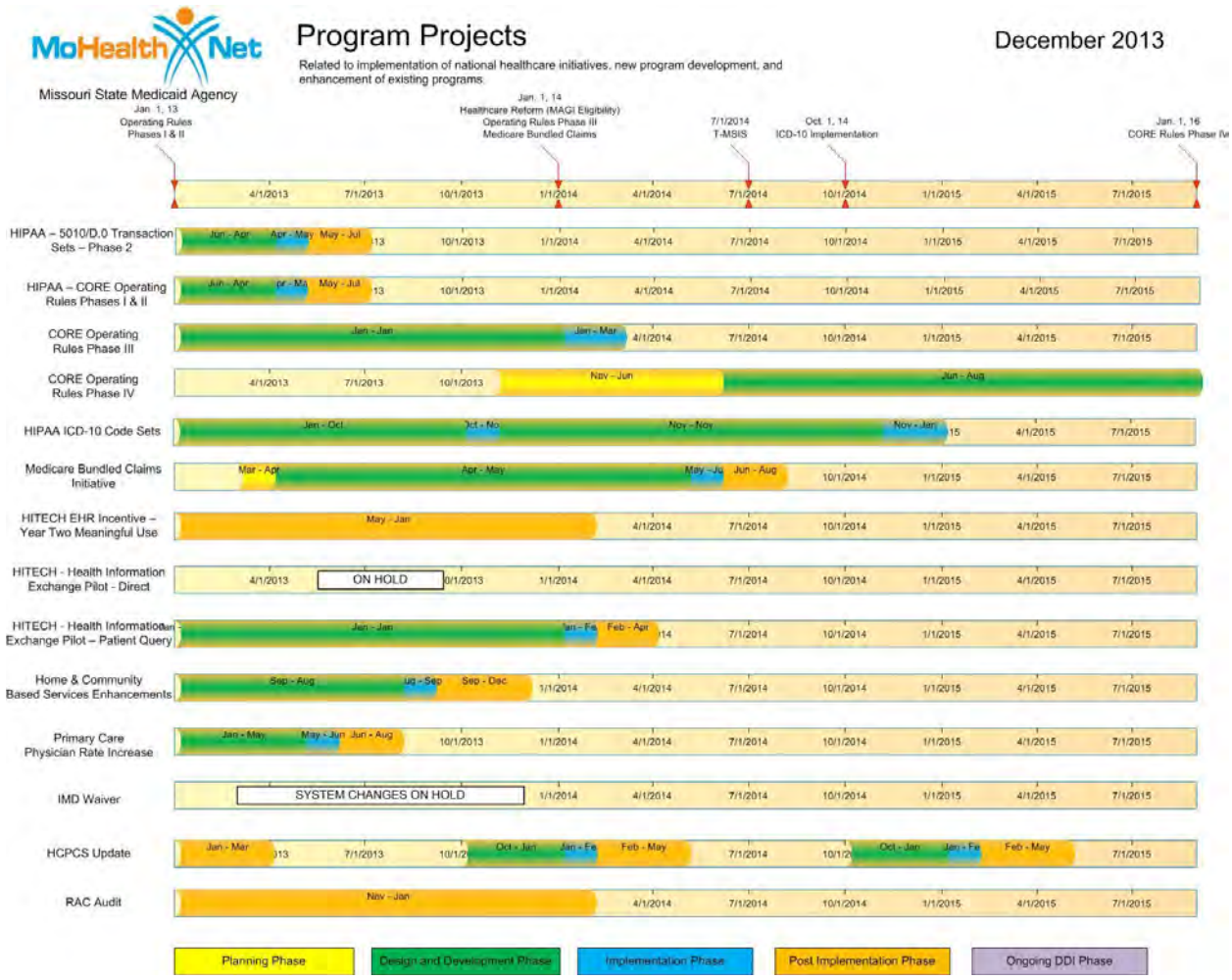
MO HealthNet has completed implementation of CyberAccess for Medicaid providers to support the following functions:

- Accessing MO HealthNet information and data;
- Transmitting prescriptions and approving refill requests electronically;
- Receiving and viewing structured lab results electronically;
- Submitting claims;
- Obtaining real-time member eligibility information;
- Conducing quality and public health reporting; and
- Accessing patient immunization history information.

MO HealthNet is committed to ensuring that CyberAccess will protect the integrity and security of all personal health information. As an active partner in the development of statewide privacy and security guidance, MO HealthNet will ensure that proper policies and procedures are in place to safeguard both provider and patient privacy.

MO HealthNet Roadmap

The Roadmap is divided into sections, those relating to MMIS and those related to federal initiatives, those needed for new programs and to provide enhanced capabilities to existing program system users.



Related to the ongoing and development and maturity of the Missouri MMIS, all of the MMIS Projects identified within the Roadmap contribute to the progression of the MMIS through the MITA maturity model to support the Missouri Medicaid business processes. The second group of projects relate to implementation of national healthcare initiatives, new program development and enhancement of system functionality supporting existing programs. Both MMIS and Federal Mandates and Other Systems projects promote interoperability between systems.

6.4 Support Health Information Exchange

The MO-HITECH is working with MHC to implement the state wide network to connect providers, hospitals, and other health care organizations to critical medical record information to improve patient care and increase efficiency. Our common efforts will achieve:

- Improving the quality of medical decision-making
- Provide accountability in safeguarding the privacy and security of medical information

- Reduce preventable medical errors and avoid duplication of treatment
- Improve the public health
- Enhance the affordability and value of health care
- Empower Missourians to take an active role in their own health care

MO HealthNet is committed to supporting the development of a statewide Health Information Network, also known as a "Health Information Exchange" through working with MHC. The technical provider for Missouri is InterSystems. They are one of the leaders in the technologies needed to support statewide efforts and are working closely with all of the key organizations involved to ensure that the system is delivered to meet the needs of Missourians.

MO HealthNet is a key stakeholder in all of MHC's organizational committees, workgroups and Board of Directors. The various workgroups and Board of Directors meet monthly and MO HealthNet has dedicated staff resources to participate. The participation brings together broad, diverse, comprehensive representatives from all health organizations in Missouri.

An important facet of the MHC efforts is to ensure financial sustainability and community value. MO HealthNet staff have been active participants in the creation of the preliminary financial models and tools that are being used to ensure this lasting value for the State of Missouri.

MHC worked with InterSystems to design a phased implementation approach for MHC HIE services. Initially, the first phase was to focus on the implementation of Direct Secure Messaging (Direct). The MHC has contracted with their TSP to provide a hosted Direct solution and has successfully implemented Direct for several HIE participants. Missouri Medicaid had been planning to participate in MHC's first phase by utilizing Direct. However, a rapidly changing landscape and delays with execution of the participation agreement resulted in a change in priorities. MO HealthNet has worked with DSS, ITSD, DMH and DHSS to identify potential Direct users within the State agencies, their use cases, and a model for supporting the implementation of Direct across the agencies. MO HealthNet will identify the users and use cases offering the most value to the State and focus on those for the initial rollout of Direct. Missouri will proceed with the implementation of Direct after the State Departments have executed the MHC participation agreement.

The MHC has contracted with their TSP to provide a hosted HIE platform to support the connection of qualified organizations. The sharing of Medicaid claims data through the statewide HIE for consumption into provider EHRs has been identified by the MHC Board as a key success factor. MO HealthNet committed to participating in the alpha pilot of the patient query function by connecting the CyberAccess platform to the HIE for the purpose of sharing Medicaid claims data. MO HealthNet is participating in MHC's patient query pilot project with the initial goal of sharing Medicaid claims data through the MHC network and anticipates completing this connection in January 2014. MO HealthNet will later expand the connection with MHC to allow for bi-directional exchange of health information to support Medicaid business functions including case management and coordination of care and prior authorization and pre-certification of participant services.

DHSS has focused on the establishment of a connection between the statewide HIN and DHSS to support public health reporting. DHSS has established a test connection with the MHC to accept public health data submitted by providers through the statewide HIN. DHSS anticipates implementing the connection during 2014.

MO HealthNet, DMH, and DHSS are actively engaged in the following projects:

- Development of an enterprise strategy and technical architecture to support the exchange of health information between the state agencies and with the statewide HIN.
- Development of a strategy to deploy an enterprise Electronic Health Record for use by state agencies to manage provision of health services to Missouri citizens and to facilitate the exchange of health information between state agencies for program support.

6.5 Support Medical Homes

Implemented in 2012, the Healthcare Homes project is considered an excellent opportunity for healthcare home providers to access more timely provider encounter and clinical data for their participants through the HIE and significantly improve the effectiveness of the case management and coordination of care efforts.

The project's goals include:

1. Coordinate care for high-risk MO HealthNet enrollees in order to improve outcomes. High-risk enrollees are defined as those with at least two chronic conditions, one chronic condition with a risk of another, or one serious and persistent chronic condition (e.gl, mental health, asthma, obesity, diabetes, heart disease, etc.)
2. Promote the adoption of Personal Health Records (PHR) by Medicaid participants.
3. Support outcome measures based on administrative data and potentially include HEDIS or HEDIS-like measures.

All providers enrolled in the Healthcare Homes are required to adopt and meaningfully use certified EHRs. To help achieve meaningful use, these providers committed to: 1) maintaining an updated problem list of current and active diagnoses and an active medication list and 2) recording and charting all changes in vital signs. The healthcare home providers will also be expected to subscribe to MHC's HIE and access clinical data related to their program participants electronically. It is anticipated that the healthcare home provider staff will eventually be able to receive real-time alerts through MHC's HIE when program participants present at emergency departments in Missouri hospitals.

Another goal of the healthcare home program is to promote the adoption of Personal Health Records (PHR) by Medicaid participants to encourage management of their health and to assist with collection of quality measures data. The Missouri Medicaid CMSP system includes a PHR application available for use by Medicaid participants. Medicaid participants are able to access their claims data through the PHR web portal. Healthcare home providers are encouraged to promote this PHR solution to their program participants or provide their own PHR solution. A

quality measure selecting for monitoring for overall success of the healthcare home program is the rate of PHR adoption by the program participants.

6.6 Capture Quality Measures Data

MO HealthNet will have an increasingly expanded quality data set as planned quality assurance activities progress over the next 12 months. Specifically, staff have been hired to conduct more robust comparative analyses of data sets, such as those related to Children's Health Insurance Program Reauthorization Act (CHIPRA), HEDIS and HEDIS-like measures for the fee-for-service population.

DMH Quality Reporting

In addition, MO HealthNet is working with the DMH to use clinical quality measures in the management of those with high-risk mental health disorders. The goal is to eventually automate this process.

Healthcare Home Pilot Quality Initiatives

A key aspect to determining the overall success of MO HealthNet's ***Healthcare Home program*** is the quality measures captured in the providers' EHRs and submitted to MO HealthNet for analysis. As a condition of program participation, all healthcare home providers were required to have implemented an EHR, and to commit to achieving Stage 1 meaningful use. The providers also commit to obtaining and submitting quality data to MO HealthNet on a monthly basis. Below are examples of the submitted quality measures:

- Percentage of patients 18–75 years of age with diabetes (type 1 or type 2) who had HbA1c <8.0%
- Percentage of patients aged 18 years and older with a diagnosis of hypertension with a blood pressure <140/90 mm Hg OR patients with a blood pressure >= 140/90 mm Hg and prescribed 2 or more anti-hypertensive medications during the most recent office visit within a 12 month period
- Percentage of patients 5-17 years of age who were identified as having persistent asthma and were appropriately prescribed medication (controller medication) during the measurement period
- Percentage of patients aged 18 years and older identified as tobacco users within the past 24 months and have been seen for at least 2 office visits, who received cessation intervention

Phase 2 options for Home Healthcare program collection of meaningful use data and clinical quality measures will be evaluated, including the option of receiving the data in the SLR.

Leveraging CHIPRA Measures

A comparison of meaningful use measures with CHIPRA measures will be conducted. At this time CHIPRA measures are reported by managed care plans only. CAHPS survey data are reported for fee for service CHIP enrollees starting in 2013, and reporting of HEDIS measures may begin in 2014. Since meaningful use requires reporting at the individual professional level, the evaluation will focus on consistency of measures. Both professionals and managed care plans are expected to have ongoing obligations to report measures in future years. MO

HealthNet will assess whether or not one submission would meet the needs of both the CHIPRA and EHR Incentive programs.

Medicaid EHR Incentive Program Measures

The State of Missouri proposes no change to meaningful use definition in Final Regulation or alternative measures at this time.

APPENDIX A: MHC BOARD OF DIRECTORS

MHC Board of Directors

Chair: Kim Day, President, Mercy Central Communities

Gail Vasterling, Director, Missouri Department of Health and Senior Services (ex-officio, voting)

Karen Edison, M.D., Co-Principal Investigator, Missouri HIT Assistance Center (ex-officio, non-voting), Center for Health Policy (CHP) at the University of Missouri

Brian Kinkade, Acting Director, Missouri Department of Social Services (ex-officio, voting)

Herb Kuhn, President and CEO, Missouri Hospital Association

Vice Chair: Ronald Levy, Executive in Residence, St. Louis University School of Public Health

Joseph Parks, MD, Director, MO HealthNet Division (ex-officio, non-voting)

Steve Roling, President and CEO, Healthcare Foundation of Greater Kansas City

Andrea Routh, Executive Director, Missouri Health Advocacy Alliance

Treasurer: David Weiss, Senior Vice President and CIO, BJC Healthcare

Secretary: Susan Wilson, Chief Operating Office & Director of MO Center for Primary Care Quality & Excellence

Steve Calloway, RPh University of Missouri Healthcare

Susan Kendig, JD

Bob Hughes, President & CEO, Missouri Foundation for Health

Mel Fetter, President & CEO, Pathways Community Health

Gaurov Dayal, MD, Senior Vice President, SSM

Board Advisor: L. Patrick James, MD, Senior Medical Director for National Accounts, Quest Diagnostics

Board Advisor: Jeffery Suzewits, DO, Associate Dean of Clinical Education, Kansas City University of Medicine & Biosciences

APPENDIX B: MISSOURI HIT PROVIDER SURVEY

1. What best describes your organization or practice type?* (Select one option)

- ☐ Hospital
- ☐ Physician or Dental Practice
- ☐ Nursing Home
- ☐ Other
- ☐ Retired (**Note: not required to complete survey**)

2. What best describes your organization or practice?* (Select one option)

- Hospital
  - ☐ General Acute Care Hospital - Non Critical Access Hospital
  - ☐ General Acute Care Hospital - Critical Access Hospital
  - ☐ Specialty Acute Care Hospital
  - ☐ Children's Hospital
  - ☐ Academic Medical Center
  - ☐ Hospital-based physician (**note: not required to complete survey**)
  - ☐ Other (please specify)
- Physician or Dental Practice
  - ☐ Solo primary care practice
  - ☐ Solo specialty care practice
  - ☐ Primary care group or partnership
  - ☐ Single specialty group or partnership
  - ☐ Multi-specialty group or partnership
  - ☐ Dental practice
  - ☐ Hospital-based physician (**note: not required to complete survey**)
- Other Organization
  - ☐ Federally Qualified Health Center or Community Health Center
  - ☐ FQHC Look-A-Like
  - ☐ Rural Health Clinic
  - ☐ Community Mental Health Center
  - ☐ Mental Health Center
  - ☐ Public Health Department

3a. Demographics*

- First Name*:
- Last Name*:
- Organization:
- Mailing Address*:
- City*:
- State*:
- Zip Code*:
- NPI # for Primary Location:
- E-mail Address*:
- Phone*: xxx-xxx-xxxx

3b. Demographics

- Respondent First Name:
- Respondent Last Name:
- Respondents Title:
- Respondent Email Address:
- Respondent Phone: xxx-xxx-xxxx

3c. Demographics

- Technology Contact First Name:
- Technology Contact Last Name:
- Technology Contact Email:
- Technology Contact Phone: xxx-xxx-xxxx

4. Do you plan to apply for provider incentives for implementing Electronic Health Record (EHR) technology?*

- ☐ Yes
- ☐ No (Go to 6)
- ☐ Unsure (Go to 6)

5. Will you seek incentives for EHR implementation from Medicare or Medicaid? Please check all that apply.*

- ☐ Yes – Medicare (Go to 7)
- ☐ Yes – Medicaid (Go to 7)
- ☐ No (Go to 7)
- ☐ Unsure (Go to 7)

6. What are the reasons for not seeking stimulus funding or incentives through Medicare or Medicaid?

- ☐ Need further information about these opportunities
- ☐ Stimulus funding available is less than the cost of a new system
- ☐ Unsure of what EHR system to purchase
- ☐ Connectivity (slow or no internet connection)
- ☐ Security and Privacy Requirements
- ☐ Inadequate training/lack of preparedness to implement
- ☐ Workflow Management
- ☐ Implementation Guidelines/Requirements
- ☐ Clinical Relevance
- ☐ Limited access to capital funding
- ☐ Do not serve Medicare or Medicaid patients
- ☐ Plan to retire in next few years

10. Please provide the following information about your organization or practice.*

	None	< 1	1-5	6-10	11-25	26-50	51-100	100+
How many physicians are there in your organization or practice?	◉	○	○	○	○	○	○	○
How many midlevel practitioners such as ARNP's, PA's and nurse midwives are there in your organization or practice?	◉	○	○	○	○	○	○	○
How many physicians or midlevel practitioners in your organization or practice will access clinical information at the individual patient level?	◉	○	○	○	○	○	○	○
How many midlevel practitioners in your organization or practice have prescriptive privileges?	◉	○	○	○	○	○	○	○

12. Does your organization currently use an EHR system?*

- ☐ Yes (go to 13 and skip 27, 28, 30)
- ☐ No (go to 27)

13. What is the name of your current EHR vendor company?

- ☐ Allscripts
- ☐ Aprima
- ☐ Athena
- ☐ Cerner
- ☐ CPSI
- ☐ eClinicalWorks
- ☐ Eclipsys
- ☐ EHSMed
- ☐ eMDs

- ☐ EPIC Systems
- ☐ GE Healthcare
- ☐ Greenway Medical Technologies
- ☐ Healthland
- ☐ HealthMEDX
- ☐ Ingenix
- ☐ McKesson Provider Technologies
- ☐ MedAppz
- ☐ MedNotes
- ☐ MediSoft
- ☐ Meditech
- ☐ NextGen Healthcare Information Systems
- ☐ PDS
- ☐ Pulse System
- ☐ Sage Software
- ☐ Siemens
- ☐ Other (please specify)

14. Do you receive regular updates from your vendor?

- ☐ Yes
- ☐ No
- ☐ Unsure

15. What year did you implement your EHR system?

Enter 4 digit year (YYYY):

16. Describe how your organization's EHR system is hosted:*

- ☐ Onsite (in-house)
- ☐ At an affiliate hospital or other practice (remote server)
- ☐ At a third party reseller vendor site (remote server)
- ☐ Over the internet with an EHR vendor (remote server)
- ☐ Other (please specify)
- ☐ Unknown

17. The following question focuses on your organization's use of EHR functionality. Indicate if your organization has a computerized system for each of the following features.*

	Yes	No	Unsure
ePrescribing	○	○	○
Patient Allergy Lists	○	○	○
Patient Medication Lists	○	○	○
Clinical Decision Support	○	○	○
Clinical Documentation/Notes	○	○	○
Medical History	○	○	○
Follow up notes	○	○	○
Patient Problem Lists	○	○	○
Patient-Specific Care Plans	○	○	○
Patient registry for grouping by chronic disease (e.g. diabetes)	○	○	○
Reminders for guideline-based interventions and/or screening tests	○	○	○
Computerized Provider Order Entry	○	○	○
Discharge Planning	○	○	○
Electronically sending orders for laboratory tests	○	○	○
Electronic receipt of lab tests	○	○	○
Out-of-range lab results levels highlighted	○	○	○
Electronically sending orders for radiology/imaging tests	○	○	○
Electronically receiving radiology/imaging results	○	○	○
Viewing electronic images of radiology tests	○	○	○
Public Health Reporting	○	○	○
Electronically sending notifiable disease notifications	○	○	○
Reporting quality measures	○	○	○
Exchange with other system	○	○	○
Provider-to-provider secure messaging	○	○	○
Provider-to-patient secure messaging	○	○	○

18. The following question focuses on your organization's use of electronic prescribing functionality. Indicate if your organization has a computerized system for each of the following features. *

	Yes	No	Unsure
Medication history for scripts prescribed by your practice's prescribers.	○	○	○
Medication history for scripts prescribed by prescribers outside your practice	○	○	○
Drug to drug interactions or contraindication	○	○	○
Drug to allergy check	○	○	○
Drug to formulary check	○	○	○
Electronic (not fax) transmission of permissible prescriptions to pharmacy	○	○	○
Electronic (not fax) refill requests from pharmacy	○	○	○
Prescriptions faxed to Pharmacy via system (i.e. Fax Server)	○	○	○
Medication reconciliation during transitions of care to avoid potential medication errors	○	○	○

19. Does your organization currently provide a means for patients to electronically access their personal health information?* (Please check all that apply)
    - ☐ Do not currently provide patient access
    - ☐ Provide secure electronic communications
    - ☐ Provide access for scheduling and payments only
    - ☐ Provide secure access to clinical records
    - ☐ Other (please specify)
    - ☐ Unknown

20. Is your EHR connected to any of the following? (Please check all that apply)

    - ☐ None
    - ☐ Another physical location owned by this organization
    - ☐ A hospital that owns this organization
    - ☐ Pharmacy
    - ☐ Other clinics
    - ☐ Other hospitals
    - ☐ Health system
    - ☐ Laboratory(s)
    - ☐ Other (please specify)

21. Is your EHR hardware provided by your EHR software vendor?

    - ☐ Yes
    - ☐ No
    - ☐ Unsure

22. How satisfied are you with your current EHR system?

- ☐ Very Satisfied
- ☐ Somewhat Satisfied
- ☐ Somewhat Dissatisfied
- ☐ Very Dissatisfied

Reason for Dissatisfaction:

27. How seriously have you considered an EHR for your organization?*
- ☐ Seriously
- ☐ Casually
- ☐ Not at all
- ☐ Considered but rejected

28. What is the degree of Electronic Health Record implementation readiness in your organization?*

- ☐ Implementation is not planned within the next 2 years
- ☐ Implementation is planned in the next 3 months
- ☐ Implementation is planned in the next 3 - 6 months
- ☐ Implementation is planned in the next 6 - 9 months
- ☐ Implementation is planned in the next 9 - 12 months
- ☐ Implementation is planned in the next 1 - 2 years
- ☐ Other (please specify)

Worksheet Note:

- *If the response to Question 28 is "Implementation is not planned within the next 2 years" then answer question 30 otherwise go to 31.*

30. Please check the main reasons your organization does not expect to invest in electronic health records (EHR) in the foreseeable future.* (Check all that apply)

- ☐ Too expensive
- ☐ Confusing number of EHR choices
- ☐ No currently available EHR product satisfies our needs
- ☐ Staff does not have the expertise or technical capacity to use an EHR
- ☐ EHRs lack interoperability with other information systems resulting in high interface costs
- ☐ Decreased productivity during implementation resulting in decreased revenue
- ☐ Concern that EHR choice will quickly become obsolete
- ☐ Staff is satisfied with paper-based records system

- ☐ Privacy and security concerns, including HIPAA
- ☐ Limited resources
- ☐ Limited broadband access
- ☐ Fear of Transition
- ☐ Other (please specify)

31. Does your organization participate in a Health Information Exchange (HIE)?*

- ☐ Yes (go to 32)
- ☐ No (go to 33)

32. Please provide the name of the HIE: _____ (go to 34)

33. What barriers do you face in participating in a Health Information Exchange (HIE)?* (Check all that apply) (go to 36)

- ☐ Limited funds
- ☐ Limited resources
- ☐ Product does not support HIE
- ☐ Vendor does not support HIE
- ☐ Limited broadband access
- ☐ No barriers
- ☐ Legal, privacy and security concerns, including HIPAA
- ☐ Other (please specify)

34. Of the following external health organizations, please indicate the ones where you have experienced problems sending or receiving clinical information.* (Please check all that apply)

- ☐ Do not have problems sending or receiving data
- ☐ Immunization registries
- ☐ Other state-operated registries (e.g., cancer, organ donation, etc.)
- ☐ Laboratories
- ☐ Public health agencies (for required reporting)
- ☐ Pharmacies
- ☐ Other (please describe)

36. Does your organization utilize Electronic Data Interface (EDI) capabilities?

- ☐ Yes (go to 36a)
- ☐ No (go to 37)

36a. Please identify all Electronic Data Interface (EDI) capabilities your organization currently uses.*

Do you currently:	Submit primary insurance claims electronically through either a practice management system vendor or a clearing house application?	Submit secondary insurance claims electronically through either a practice management system vendor or a clearinghouse application?	Submit claims through website provided by the payer?	Verify insurance eligibility electronically through either a practice management system vendor or a clearinghouse application?	Verify insurance eligibility through a website provided by the payer?
None	☐	☐	☐	☐	☐
Medicare	☐	☐	☐	☐	☐
Medicaid (MO HealthNet)	☐	☐	☐	☐	☐
Kansas Medicaid (HMO or PPO)	☐	☐	☐	☐	☐
Aetna Health	☐	☐	☐	☐	☐
Anthem Blue Cross & Blue Shield	☐	☐	☐	☐	☐
Arcadian Health Plan	☐	☐	☐	☐	☐
Blue-Advantage Plus	☐	☐	☐	☐	☐
Blue-Care	☐	☐	☐	☐	☐
Children's Mercy's Family Health	☐	☐	☐	☐	☐
CIGNA Kansas/Missouri	☐	☐	☐	☐	☐
CIGNA St. Louis	☐	☐	☐	☐	☐
Community Health Plan	☐	☐	☐	☐	☐
Coventry Health Care Kansas	☐	☐	☐	☐	☐
Cox Health Systems HMO	☐	☐	☐	☐	☐
Essence Healthcare	☐	☐	☐	☐	☐
Group Health Plan	☐	☐	☐	☐	☐
Harmony Health Plan Missouri	☐	☐	☐	☐	☐
Healthcare USA Missouri	☐	☐	☐	☐	☐
Healthlink HMO	☐	☐	☐	☐	☐
Humana Health Plan	☐	☐	☐	☐	☐
Mercy Health Plans Missouri	☐	☐	☐	☐	☐
Missouri Care	☐	☐	☐	☐	☐
Molina Healthcare Missouri	☐	☐	☐	☐	☐
UnitedHealthcare Midwest	☐	☐	☐	☐	☐

37. Please identify all transactions you process electronically:

Do you currently:	Remittance Advice	Claims Status Request	Claims Attachments	Electronic Funds Transfer (EFT)
Conduct the following types of transactions electronically through either a practice management system vendor or a clearinghouse application	☐	☐	☐	☐
Conduct the following transactions through a website provided by the payer	☐	☐	☐	☐

38. Does your organization have an onsite lab?*

- ☐ Yes (go to 39)
- ☐ No (go to 41)

39. Does your onsite lab provide results to external entities?*
- ☐ Yes (go to 40)
- ☐ No (go to 41)

40. Does your lab have the capability to*:

Receive orders electronically
- ☐ Yes
- ☐ No

Send results electronically
- ☐ Yes
- ☐ No

41. What type of internet access do you have at the point of care, in your location or locations (check more than one if multiple locations and differences apply)?

- ☐ Do not have internet access (Go to 43)
- ☐ Dial Up
- ☐ Cable
- ☐ Satellite
- ☐ T-1
- ☐ Fiber Optic Cable/FiOS
- ☐ Wireless (WiMax/WiFi/3G/4G/Microwave)
- ☐ DSL
- ☐ Other (please specify)

42. What is the name of your internet provider?

43. Are you interested in receiving information or assistance in any of the following areas?* (Please check all that apply)

- ☐ Do not want to receive information or assistance (Go to 44)
- ☐ Federal Medicare EHR incentives
- ☐ Federal Medicaid EHR incentives
- ☐ Missouri HIE development
- ☐ Interfacing with the Missouri HIE
- ☐ Quality indicator reporting
- ☐ Lab reporting
- ☐ Electronic prescribing
- ☐ Clinical Data
- ☐ Assessment of your current organization readiness
- ☐ Assistance with vendor selection and contracting
- ☐ Workflow redesign
- ☐ Project management during EHR implementation

- ☐ Software configuration and data pre-load
- ☐ Optimization of your EHR utilization after go-live
- ☐ IT Services
- ☐ Data Center Hosting
- ☐ Security and Privacy Compliance (HIPAA)

45. What is your preferred method of contact?

- ☐ Phone
- ☐ Email _____
- ☐ US Mail

44. Does your organization have more than one location?

- ☐ Yes (Go to 47b)
- ☐ No (Survey Complete)

47b. Please list each location for your organization or practice and for each location, please indicate whether EHR is available at the location.

If the response has been pre-populated, please verify the data and update or delete locations as necessary.

	Address	City	State	Zip	EHR Available? Yes	No
1.					○	○
2.					○	○
3.					○	○
4.					○	○
5.					○	○
6.					○	○
7.					○	○
8.					○	○
9.					○	○
10.					○	○

APPENDIX C: LIST OF ACRONYMS

The following acronyms are used throughout this document:

Acronym	Definition
AC	Missouri HIT Assistance Center
AIU	Adopt/Implement/Upgrade
ABP	American Board of Pediatrics
ACA	Affordable Care Act
ACS	Affiliated Computer Systems
AHC	Administrative Hearing Commission
AHS	Automated Health Systems
AHRQ	Agency for Healthcare Research and Quality
ARRA	American Recovery and Reinvestment Act of 2009
AVRS	Automated Voice Response System
CAH	Critical Access Hospital
CCD	Continuity of Care Document
CCIP	Chronic Care Improvement Program
CCN	(Federal) CMS Certification Number
CDC	Centers for Disease Control and Prevention
CEHRT	Certified Electronic Health Record Technology
CEO	Chief Executive Officer
CFR	Code of Federal Regulation
CHIPRA	Children's Health Insurance Program Reauthorization Act
CHPL	Certified HIT Product
CIMOR	Client Information Management Outcomes Reporting
CLIA	Clinical Laboratory Improvement Amendments
CMS	Centers of Medicare & Medicaid Services
CMSP	Clinical Management Services Pharmacy and Prior Authorization system
CoP	Community of Practice
CPOE	Computerized Provider Order Entry
CQM	Clinical Quality Measure
DCN	Department Client Number
DHSS	Department of Health and Senior Services
DMH	Department of Mental Health
DO	Doctor Of Osteopathic Medicine
DOQ-IT	Doctor Office Quality- Information Technology
DSS	Department of Social Services
ECC	Electronic Claims Capture
ECP	Electronic Claims Processing
EDI	Electronic Data Interchange
EFT	Electronic Funds Transfer
EH	Eligible Hospital
EHR	Electronic Health Record
EMR	Electronic Medical Record
EP	Eligible Professional

Acronym	Definition
ER	Emergency Room
FFP	Federal Financial Participation
FFS	Fee For Service
FPL	Federal Poverty Level
FQHC	Federally Qualified Health Center
FTP	File Transfer Protocol
HIE	Health Information Exchange
HIN	Health Information Network
HIO	Health Information Organization
HIPAA	Health Insurance Portability and Accountability Act
HISPC	Health Information Security and Privacy Collaboration
HIT	Health Information Technology
HITEC	Health Information Technology Extension Center
HITECH	Health Information Technology Economic and Clinical Health Act
HL7	Health Level 7
HMO	Health Maintenance Organization
HRSA	Health Resources and Services Administration
IAPD	Implementation Advanced Planning Document
IAPDU	Implementation Advanced Planning Document Update
ICD-10-CM	International Classification of Diseases, 10th Revision, Clinical Modification
ICD-10-PCS	International Classification of Diseases, 10th Revision, Procedural Coding System
ID	Identification
IRS	Internal Revenue Service
IT	Information Technology
ITSD	Information Technology Services Division
LAN	Local Area Network
LOINC	Logical Observation Identifiers Names and Codes
LPHAS	Local Public Health Agencies
LTC	Long Term Care
MAFP	Missouri Academy of Family Practice
MAR	Management and Administrative Reporting
MARS	Management and Administrative Reporting Subsystem
MCO	Managed Care Organization
MCPHC	Missouri Coalition for Primary Health Care
MD	Medical Doctor
MDS	Minimum Data Set
MFCU	Medicaid Fraud Control Unit
MHA	Missouri Hospital Association
MHABD	MO HealthNet for the Aged, Blind or Disabled
MHC	Missouri Health Connection
MHF	MO HealthNet for Families
MITA	Medicaid Information Technology Architecture
MME	Missouri Medicaid Enterprise
MMIS	Medicaid Management Information System

Acronym	Definition
MOHSAIC	MO HealthNet Strategic Architecture and Information Cooperative
MO-HITECH	Missouri Health Information Technology Economic and Clinical Health
MSIS	Medicaid Statistical Information System
MTA	Medical Trading Area
MTG	Medicaid Transformation Grant
MU	Meaningful Use
NAMCS	National Ambulatory Medical Care Service
NCPDP	National Council for Prescription Drug Programs
NHIN	Nationwide Health Information Network
NLR	National Level Repository
NPI	National Provider Identifier
NTIA	National Telecommunications and Information Administration
OIG	Office of the Inspector General
OIS	Office of Information Systems
ONC	Office of the National Coordinator for Health Information
PA	Physician Assistant
PHI	Protected Health Information
PHIN	Public Health Information Network
PHR	Personal Health Record
PHSA	Public Health Services Act
PIP	Provider Incentive Payment
POS	Place of Service
PPCP	Primary Care Physicians
QMB	Qualified Medicare Beneficiary
QO	Qualified Organization
PQRS	Physician Quality Reporting System
R&A	CMS Registration and Attestation System
REC	Regional Extension Center
REV	Recipient Eligibility Verification
RHC	Rural Health Clinics
ROI	Return on Investment
RUS	Rural Utility Service
SCHIP	State Children's Health Insurance Program
SHIECAP	State Health Information Exchange Cooperative Agreement Program
SLR	State Level Registry
SMA	State Medicaid Agency
SMD	State Medicaid Director
SMHP	State Medicaid Health Information Technology Plan
SMHPU	State Medicaid Health Information Technology Plan Update
SNOMED	Systematized Nomenclature of Medicine-Clinical Terms
SS-A	State Self Assessment
SUR	Surveillance and Utilization Review
TIN	Taxpayer Identification Number
TPL	Third-Party Liability
TSP	Technical Services Partner

Acronym	Definition
US DHHS	United States Department of Health and Human Services
USDA	United States Department of Agriculture
VA	Veterans' Administration
VistA	Veteran's Health Information Systems and Technology Architecture
WIC	Women Infants and Children Program
XML	Extensible Markup Language